THE NEW YORK

JOURNAL OF MEDICINE.

FOR NOVEMBER, 1843.

PART FIRST.

Original Communications.

ART. I.—*Account of a Malignant Fever which prevailed at Rondout, Ulster County, New York, in the months of August and September, 1843, with an Inquiry into its Nature and into the Question of its Importation by the Schooner Vanda; based upon an Investigation of the Disease at Rondout, during nineteen days, and upon the private Correspondence of the Mayor and Resident Physician of the city of New York.*—By the EDITOR. Dedicated to the Board of Health of the City of New York.*

[With a lithographic view of the Village of Rondout.]

IN all ages of the world, the dread of pestilential diseases, which have, from time to time, swept over vast tracts of the earth's surface, has exerted a most decided influence, in the way of fear and terror, upon the human mind. At Rome, *Febris* had her altars and temples in the palace; but in the year of their city 461, when a pestilence prevailed which their domestic gods could, or perhaps *would*, not drive away, the Romans sent a solemn embassy to Epidaurus, famed for having been, in the mythological legends of Greece, the natal place of Æsculapius, in order to obtain the sacred serpent nourished there in the tem-

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* This paper having been laid before the Board of Health, the following action was taken upon it:

Resolved, That the "Account of a Malignant Fever, which prevailed at Rondout, Ulster county, New York, in the months of August and September, 1843, with an inquiry into its nature and into the question of its importation by the schooner Vanda, based upon an investigation of the disease at Rondout, during nineteen days, and upon the private correspondence of the Mayor and Resident Physician of the city of New York," presented to the Board of Health by Dr. Forry, be ordered on file.

Resolved, That the thanks of this Board be, and hereby are, tendered to Doctor Forry for the said publication so presented to them.

Resolved, that the clerk of this Board transmit a copy of these resolutions to Dr. Forry.

Adopted by the Board of Health, October 25th, 1843.

ROBERT H. MORRIS,
Mayor of the City of New York and President of the Board of Health.
SAMUEL J. WILLIS, Clerk of the Board of Health.

ple of the God of physic and physicians.* Thus did the sage fathers of Rome quiet an excitement upon the subject—we will not say of *yellow fever*, inasmuch as neither AURUS CORNELIUS CELSUS nor CLAUDIUS GALENUS deigns to treat upon the disease; but we opine, let the pestilence have been what it may, that the measure was not less efficacious than that of a "proclamation" of non-intercourse adopted, under somewhat similar circumstances, by the fathers of a more modern city. In this remark, we do not of course, as will be seen in the sequel, intend any disparagement to our Board of Health, which must, to some extent, be an exponent of public sentiment. The Board, it will be seen, was, in fact, without an alternative.

The modern example to which we refer, is the popular excitement that has been recently evinced, as the result of the supposed introduction of *Tropical Yellow Fever* at Rondout, alleged to have been imported from the West Indies by the schooner Vanda. So intense did this excitement suddenly become that the Board of Health of the city of New York, at a special meeting, convened on a *Sunday*, proclaimed a temporary non-intercourse, until the subject might undergo proper investigation. Within the space of several days, the whole country for hundreds of miles was thrown into a ferment of agitation and apprehension. This fear was so strongly manifested by the towns along the Hudson, as Rhinebeck, Poughkeepsie, etc., that the barges of these towns, carrying products for the market of the city of New York as well as passengers, were no longer allowed to be transported by the steamers which occasionally lay at Rondout, notwithstanding a contract for the whole season of navigation. More than this, the steamboats of the Hudson, notwithstanding Rondout is two miles from its place of landing, would no longer touch on the same side of the river. Rondout thus, in a few days, was brought to the point of suffering a suspension of its business operations; and this business, it will be seen, in consequence chiefly of being the outlet of the Delaware and Hudson Canal, is of a very extensive character. Deserted by the surrounding country upon which Rondout relies in part for subsistence, the inhabitants, had the non-intercourse with the city of New York been continued, would have been even threatened with starvation!

As the panic thus excited, and the rapidity of its march, cannot be realized by those who did not witness it, we make this permanent record of it for the benefit of posterity, who will surely place it in the same category of historical events with that of the solemn embassy sent by the Romans to Epidaurus, to procure the sacred serpent.

The first official notice of this malignant fever is the following proclamation and proceedings of the Board of Health:

MAYOR'S OFFICE,
New York, August 27, 1843.

PROCLAMATION.

Whereas, at a special meeting of the Board of Health convened in the City Hall, on Sunday evening, the 27th instant, information was received that a malignant fever is prevailing at the villages of Rondout and Kingston, in the county of Ulster. And whereas, the health of the City of New York, as appears by the report of the Resident Physician, is unusually good at the present time, and in order that it may remain unimpaired, *Now therefore*, I, Elijah F. Purdy, Acting Mayor of the City of New York, pursuant to the direction of the Board of Health, do hereby declare and make known, that all

* Anthon's Classical Dictionary, article *Æsculapius*.

intercourse is hereby prohibited between the city of New York and the villages of Rondout and Kingston, in the county of Ulster, from the date of this Proclamation, until Wednesday, the 30th of August, 1843, at 12 o'clock, noon, in order that time may be afforded the Resident Physician, who has been deputed to visit the above places for that purpose, to obtain correct information on the subject. I do, therefore, hereby give notice to each and every person, that they will be liable to fine and imprisonment if they contravene or violate the provisions of the law relative to infectious and pestilential diseases. And all persons are hereby required to aid and assist in the execution and enforcement of the law in conformity with the tenor and true intent of this Proclamation, by every means in their power.

Witness my hand and seal this 27th day of August, 1843.

ELIJAH F. PURDY, Acting Mayor.

SPECIAL MEETING OF THE BOARD OF HEALTH.

AUGUST 27, 1843.

Present, Elijah F. Purdy, Acting Mayor; Aldermen Dunning, Nash, Vandervoort, Briggs, Brady, Pattison, Henry, Dougherty, Ward, Nichols, Seaman, Pettigrew; Doctor Vaché, Resident Physician, and Dr. Harris, Health Commissioner.

The Acting Mayor stated that he had convened the Board together in consequence of receiving a communication from the Resident Physician, informing him that a letter from H. M. Romeyn, of Kingston, had appeared in the newspapers stating the existence of yellow bilious fever in that place.

NEW YORK, August 27th, 1843.

To Elijah F. Purdy, President pro. tem. of the Board of Health:

Sir—Through the newspapers of this morning, by the publication of a letter from Mr. H. M. Romeyn, of Kingston, I am of the opinion that sufficient cause exists for the convening of the Board of Health.

Should the disease, said to have appeared at Kingston, be the yellow fever, arising from the recent visit of the schooner Vanda to that place, the same necessity exists for a non-intercourse between it and this city as would with any other portion of the world.

With great respect, your obedient servant,

ALEXANDER F. VACHE, Resident Physician.

Whereupon, on motion of Ass't. Ald. Brown, a committee was appointed fo the purpose of ascertaining the authenticity of said letter.

The acting Mayor appointed Assistant Ald. Brown, Ald. Briggs, Assistant Ald. Henry said committee, who soon returned and reported that said communication was authentic. The report was accepted and the committee discharged.

The Acting Mayor presented the following resolution, which was adopted—viz:

Resolved, That Dr. Alexander F. Vaché, Resident Physician, be authorized to proceed forthwith to Kingston and report immediately to the Board of Health the character of the disease said to exist at said place, with such other information as he may deem of importance.

Assistant Ald. Brown presented the following resolution, which was unanimously adopted, viz:

Resolved, That his Honor the Mayor be requested to issue his proclamation, prohibiting all intercourse with the villages of Rondout and Kingston, in Ulster county, from this day until Wednesday next, at 12 o'clock noon.

The Resident Physician reported the city unusually healthy, and that no case of yellow fever or malignant fever had occurred.

Alderman Nash moved that the letter of the Resident Physician addressed to the Acting Mayor be published as part of the proceedings of this meeting, which was adopted

Assistant Ald. Pettigrew presented the following resolutions, which were adopted, viz:

Resolved, As the opinion of this Board, that to preserve the present good health of the city, it is all important that great care should be taken to remove all nuisances from any and all premises about the city; and that the Health Wardens and Street Inspectors, as well as citizens, report all cases of neglect to the City Inspector or the Aldermen and Assistant of the severa wards of the city, that the same may be promptly attended to.

Resolved, That the Health Wardens and Street Inspectors of the several wards are hereby instructed to be prompt in enforcing the law in relation to all cases of neglect of nuisances removed.

Resolved, That the proceedings of this meeting be published in all the morning papers.

On motion, the Board then adjourned.

SAMUEL J. WILLIS, Clerk.

BOARD OF HEALTH, Aug. 29, 1843.

The following letter was received from the resident physician, Dr. Alexander F. Vaché, and on motion of Alderman Scoles, the same was directed to be published.

Rondout, August 28th.

To the President of the Board of Health of the City of New York:

Sir,—I reached here at noon, and have since been employed in visiting the sick, and in receiving information from the physicians of the village. That a fever prevails here to some extent, cannot be disputed; but as most of the cases that I have seen are more or less convalescent, I have concluded not to return to the city until to-morrow, in order that I may reach a more correct decision as to the character of the disease, by watching its progress in two individuals attacked within the last twenty-four hours, the more especially as the physicians of the place unequivocally assert that they have seen the same disease for the last two or three months. From all I have been enabled to collect, it appears that there have been about eighteen cases since the visit of the schooner Vanda, and three deaths; the population is about 1800.

A. F. VACHE.

P. S.—Should the period of non-intercourse between the city and the village of Rondout expire before I have the opportunity of again communicating with the Board of Health, I would recommend that it be not renewed, as I do not think there is any cause for the great alarm created by the letter of Mr. Romeyn. I expect, however, to be in the city previous to that time.

BOARD OF HEALTH, August 30, 1843.

Present—Elijah F. Purdy, Esq., Acting Mayor, Aldermen Clayton, Tillou, Nash, Brady, and Rawson; Assistant Aldermen Henry, Brown, and Smith.

The following communication was received from Dr. Alexander F. Vaché, Resident Physician.

New York, August 30, 1843.

To the Board of Health:

Gentlemen,—In accordance with the instruction of the Board of Health, I proceeded immediately to Rondout in order to collect the facts and observe the character of the disease alleged to prevail in that village. From the information derived from the principal physicians of the place, Drs. Stringham and Elting, it appears that the same form of fever occurred in their practice for about two months prior to the arrival of the schooner Vanda from the quarantine ground at New York, and that it now exhibits, in their opinion, no new features, unless it may be an aggravation of the symptoms, and an increase in the number of the persons it attacks. In connection with this fact, and from a personal visit to the sick, I am of opinion that the disease, as it now appears, is bilious remittent fever, readily yielding to active medicines, and attended with none of the aggravated and malignant characters of yellow fever. That the attack of the captain of the Vanda, the mate, one passenger, and the pilot, as well as a number of persons living in the village, after the arrival of the schooner at Rondout, forcibly leads to the opinion of a connection between the vessel and the

disease cannot be denied; yet when it is taken in connection with the positive and unequivocal assertion of the physicians, that they attended cases of the same fever in the place prior to the arrival of the Vanda, it is but just to infer that no connection can be traced between them.

Under the circumstances, I would, therefore, suggest, for the consideration of the Board of Health, the absence of any actual necessity for the continuance of the non-intercourse between the two places, especially as it has now expired, and can be immediately resumed, should the disease assume a different type. No disease of a similar nature, on the assurances of Dr. Nelson, has appeared at Kingston.

As a precautionary measure, I obtained a promise from Drs. Stringham and Elting, to keep me daily informed of the cases which now exist, as well as of any others that may occur. I also addressed a note to Dr. Nelson, of Kingston, and to the Rev. Mr. Carl, of Rondout, requesting of them the favor of the same information.

The number of cases, as near as I could ascertain, was sixteen—the two last between Saturday and Sunday last; the number of deaths, three. No more were reported up to Tuesday evening.

It may not be irrelevant to add, that a portion of the village of Rondout is located on low, made-ground, immediately on the border of a creek, and about one mile from the Hudson River. It contains nearly two thousand inhabitants, and is amply furnished with all the requisites for the engendering and continuing of various forms of fever.

Respectfully, &c.

ALEX. F. VACHE, Resident Physician.

This panic met us in New England, whither we had gone for the purpose of recreation and of enjoying the salubrious country air; and we concluded, in view of the interest of our readers, to bring up our pleasure-trip at Rondout. On the evening of September 3d, we reached Kingston Point, two miles from Rondout; and here we had the first illustration of the effects of the panic in the report that an old negro in the vicinity, had the yellow fever. But the fact of his African origin, which implies almost an insusceptibility to the disease, was presumptive evidence that the report was a false one; and this opinion was fully verified by his examination.

We may here say that we did not go to Rondout to establish any pre-conceived opinions, but to collect all the facts accessible, and to lay before the medical public a comprehensive and an impartial view of the whole subject. We had no desire whatever to acquire newspaper notoriety, regarding such displays as rather unprofessional; but finding, on our arrival, the two physicians sick, who had agreed to keep the Resident Physician of New York, Alexander F. Vaché, M. D., apprised of the daily progress of events, we undertook the task of giving him the information by letter. It was not, however, until the Resident Physician requested the privilege of publishing extracts from our letters, on the ground of allaying public excitement, that we assented; and this correspondence we continued daily during our stay, which was a period of nineteen days. Although we have already expressed certain opinions in regard to the nature of this disease, yet we trust that our facts will not be the less impartial. Indeed, on the last day of our investigation at Rondout, we felt more impressed than on the first, with the truth of the language of the Psalmist, that "*pestilence walketh in darkness;*" and we may here add, as an illustration of the disposition of mankind to generalize from insufficient data, that the letters marked "private" and "confidential," which we almost daily received, and all of which were prompted by the best feelings of the human heart, urged us, at the

distance of one hundred miles from the malignant disease, to be very cautious as to what we might write, inasmuch as the disease was certainly *yellow fever imported by the Vanda.* And we would here further state, that we are not so ignorant of wonder-loving human nature, as not to know that the vast majority of the community will continue to hug the stubborn belief, that this disease was yellow fever, and that it was imported by the Vanda, despite any array of facts that may be presented. We write, however, for the profession alone; and should any one not within that pale, do us the honor of perusing this article, we would beg him, with due deference to his general abilities, to bear in mind that we regard him incapable of comprehending this great question; and to this opinion we are led, on the ground that the subject involves many important collateral points, which our limits will not allow to be introduced here, and with which the medical reader is supposed to be already familiar.

We will add further, that in the execution of the present task, we merely perform a duty incumbent on us as the editor of a medical journal; and should the numerous facts that we have collected most faithfully, authorize conclusions opposed to the opinions of others previously expressed, we would beg such persons not to blame us but the facts themselves. Moreover, should any one, in the event of our committing errors of fact, be so kind as to point them out, we shall make the corrections in the following Number with much pleasure.

Before inquiring into the history of the schooner Vanda and her relation with the malignant disease that lately prevailed at Rondout, let us investigate the medico-topography of this locality; and to comprehend our description more fully, let the reader take a glance at the lithographic view of the village which adorns this Number of the journal.

Rondout is situated on the left bank of the river of the same name, about one mile from its debouchure into the Hudson, and one hundred miles from the city of New York. The Rondout winds through a broad valley between the Blue and Shawangunk mountains; and its head of navigation is at Eddyville, only three miles and a quarter from its mouth. The Walkill runs a north east course south of the Shawangunk mountain, receiving the Shawangunk creek, and uniting with the Rondout, eight miles from its mouth. The Rondout, which has a length of about fifty-five miles, is the great drain of this fertile region.

The Rondout, which is about one hundred and fifty yards wide opposite the village, has a narrow margin on its left bank, gradually widening from a mere point to perhaps one hundred yards; and this, which is called the "*strand,*" constituting the business part of the village, was originally a sand marsh. It has been filled up by bringing down the ground from the hills; but this process is also going on naturally, as is illustrated in some of the store-houses on the wharf. One which we examined, had been built some thirty years ago, in such a manner that a man could walk upright under it; but now the ground has risen to a level with it, through the combined process of art and of the natural disintegration of the adjacent precipitous hills, mingled with the wash of the streets. During a heavy rain of some hours, we saw, for example, perhaps a hundred cart-loads of sand brought down this steep declivity. Upon this so-called *strand* and the steep acclivity of these hills, from whose summits primitive rocks project, is situated the village of Rondout, with a population of from fifteen to eighteen hundred. Of the

inhabitants, fully one-third are of that class who depend for subsistence upon their daily labor; and these last are mostly immigrant Irish, with a few Germans, all engaged in discharging canal-boats and loading vessels. The houses directly in the rear of the strand, or chief business part of the village, have a foundation even higher than the tops of those immediately in front. The village generally has an elevation of thirty to fifty feet above tide-water, while some of the best dwellings have an altitude of about two hundred feet; and at a short distance in the rear of this last point, commences the table-land, which has an elevation of three hundred feet above the Hudson.

The village of Rondout, which has scarcely yet found a place upon our maps, has grown into importance within a few years, chiefly through the anthracite coal of Pennsylvania (Lackawana.) This coal is transported upon the Delaware and Hudson canal, which intersects the Rondout river at Eddyville; and so immense is the extent of this trade, that, during the season of canal navigation, sixteen hundred tons, upon an average, arrive and depart at this depot daily; while, in the winter season, there is here an accumulation of from ten to thirty thousand tons, to answer the demands of the spring market. Hence it is not unusual to see from forty to sixty vessels, (sloops and schooners,) lying at the wharf at Rondout, completely hidden in this deep ravine, even their highest masts being far overtopped by the table-land on the left-bank and by the abruptly precipitous hills arising directly from the right side of the Rondout.

Another article of commerce with which this region abounds, is the rock from which is manufactured hydraulic cement, especially valuable for its property of hardening under water; and in the immediate vicinity of the village is the quarry of the Hon. Abraham Hasbrouck, which has been extensively worked for the last five years; a passage of thirty feet in breadth and with perpendicular walls fifty feet high, having been excavated in the solid rock of a high ridge to the distance of six hundred feet.

In the view here presented of the physical features of this locality—rocky primitive hills covered with pines—no one will fail to perceive a combination indicating a salubrious position. There is, it is true, some marshy ground, perhaps two acres, on the Rondout, adjoining the village on the south-west; but, as these marshes have a sandy foundation, and are, like the flats of green meadow near the mouth of the Rondout, swept over by the tide each day, no deleterious influence can be referred to this source. Nor can the new-made ground of the *strand*, consisting, as it does, mainly of the dry and gravelly formation of the hills, be regarded as productive, in a great degree, of malarious emanations.*

It has been accordingly found that this locality has always been pre-eminently salubrious, with the rare exceptions, as will be shown in the sequel, to which the most healthy places, in all parts of the world, are liable. During August and September of last year, for example, when dysentery and scarlatina prevailed, the mortality was equally high with this year; but then, as there was no panic of a contagious disease, what little excitement was produced was limited to the immediate spot. We

* Although in the United States, it is the rule that malarious diseases, other causes being equal, augment in proportion as the soil abounds in organic remains; yet it is found, in some other countries, that this law has numerous exceptions. Some of the dry and rocky localities, as in the Bermudas, are subject to the highest grades of yellow fever; but this last disease, which is now generally admitted to be specific in its nature, we are not, however, warranted in ascribing to a paludal origin.

have been informed by Mr. Hasbrouck, already named, to whom we are indebted for other interesting facts, that this place, where he has resided for the last 48 years, has always been favored with more than an average degree of healthfulness.

We have been made acquainted with several highly interesting historical facts connected with this locality; but which, as they are not immediately relevant to its medical topography, we will present in the form of a note.*

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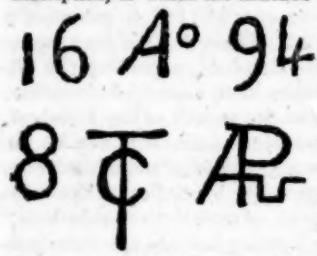
*This county, Ulster, was settled by the Dutch and some Huguenots as early as 1616; and to this day, the language of Holland is yet considerably spoken. This was the ancient Esopus—the Indian name adopted by the Dutch; and while under them, it suffered more from Indian hostilities than any other portion of the country. In October 1777, when the British under General Vaughan, burnt down the village of Kingston, then named Esopus, and then too one of the largest places in the province of New York, Rondout, then called "Esopus Landing," was also destroyed, with the exception of a mill and a house, the latter being yet a substantial dwelling. Even before the Revolutionary war, Rondout was the outlet for all the surplus produce of this district of country.

We here got access to a highly interesting record among the deeds of Mr. Hasbrouck, viz., a patent bearing the date of October 28, 1686, granted by Thomas Dongan, "Capt Generall, Governor in chiefe, and Vice Admirall in and over the Province of New Yorke and Territoryes depending thereon, in America, under his Majesty, James the Second, by the grace of God, King of England, Scotland, France, and Ireland, defenders of the faith, &c" This patent was issued in the "second yeare of his Majestyes reigne" to Captain Thomas Chambers, it being a consolidation and confirmation of several other patents, and also of 300 acres of land, to which there was "no lawful owner, either Christian or Indian." This last tract of 300 acres was included on the ground that he, Major Chambers, (this patent also promoting him from a captaincy to a majority,) had cultivated and improved it, and in consideration also that said Captain Chambers "hath likewise signally behaved himselfe in the warrs against the Indians." The whole is granted under the title of the "Lordship and Manor of Foxhall."

We also traced the ruins of Major Chambers' family vault, which is on a knoll of greywacke, resembling an Indian mound, and covered with a light soil, which, however, supports large trees and other vegetation. The dilapidated tombstone has an inscription, of which the annexed wood-cut is a fac-simile:



This may be deciphered thus—16 *anno* 94, 8 *Thomas Chambers, April*, which means that Thomas Chambers, died on the 8th of April, in the year 1694. Major Chambers, when an old bachelor, married the widow of Van Gaasbeeck, the Domine of the Esopus Dutch Reformed Church, she being an accomplished lady from Amsterdam. As the Major died without issue, he willed the *Lordship and Manor of Foxhall* to the only son of his widow, on condition that he would assume the name of Chambers.

On this same knoll, we observed an important fact in natural history, namely a Pear-tree, doubtless 150 years of age, standing at the entrance of the vault. The trunk near the ground is now almost twelve feet in circumference, but forty years ago the trunk as well as the tree generally, was very much larger. It is referred to as a land-mark in a deed of 1714; and in 1815, when Mr. Hasbrouck had a litigation relative to a certain boundary line indicated by this tree, it was identified by three witnesses, all about 85 years of age, who averred that in their boyhood it was known as the "*old pear-tree.*" It still bears excellent fruit, as we can testify from personal knowledge. From the position of this tree at the entrance of the vault, in which the body of Major Chambers was deposited 149 years ago, it is presumable that, if not then already a flourishing tree, it was about that time planted.

The name, Rondout, is generally supposed to be a corruption of *redoubt*, as there were here in recent years the remains of a fort said to have been built in the French and Indian war, just prior to the Revolution; but, in this deed of 1686, we find the name of the river written, "*round out kill*," *kill* being the Dutch for *stream*.

We are next to inquire what part the schooner Vanda played in the tragedy of Rondout.

The Vanda sailed from Baltimore with a cargo of lumber, bound for Point Petre, Gaudaloupe, where she arrived on the 27th of June. Having discharged her cargo, she sailed, July 13th, in ballast for St. Martin's, the crew being all well. Point Petre, however, was sickly; but whether it was a yellow fever or not that prevailed, cannot just now be determined. The schooner arrived at St. Martin's, July 15th. The chief mate, who had sickened on the day of sailing, was immediately taken ashore and placed under the care of the port physician, who pronounced his disease to be typhus fever. He died on shore on the 17th, the remainder of the crew continuing in good health. Having taken in a cargo of salt and pine-apples, the Vanda sailed, on the 22d of July, for New York, and arrived at quarantine on the 7th of August. A day or two previous to this, the steward and one of the men had been taken ill; and as soon as the vessel arrived, they were sent to the hospital. Both were affected, according to the records of the hospital, with mild remittent fever, and both were discharged perfectly well and able to work, the one on the fifth, and the other on the eighth day, after admission into hospital. As it was manifest to Dr. Van Howenbergh, the Health Officer, that neither of these men had labored under any malignant or contagious disease, he released the schooner from quarantine, after the forecastle had been whitewashed and the vessel ventilated, as well as the clothing and bedding washed. She now proceeded to Rondout, where she arrived on the 14th of August.

How far the Health Officer violated any quarantine regulation, by thus releasing the Vanda, is immaterial to the question here at issue. Suffice it to say that in regard to vessels wholly laden with *salt*, "being healthy and from *healthy* ports" a discretionary power is held by the Board of Health or by the Mayor and Commissioners of Health; but this power does not pertain to the Health Officer. As regards fruit, it is not, when in a sound state, subject to quarantine.

We will here introduce, independent of the records of the hospital at our Quarantine, the following papers upon which the above account is partly based:

Translation.

The undersigned garrison physician of the port of Philipsbury, Island of St. Martin's, certifies that the crew on board the schooner *Vanda*, commanded by S. Pierce, are all in *health*, and that there are no *contagious* or *epidemic* diseases prevailing in said Island.

——— Romondt, M. D.

St. Martin's July 20th, 1843.

The foregoing certificate is correct and true, and deserving of faith or belief. D. Atwell, Port Captain.

The following affidavit by George H. Welles, a native of Pennsylvania, who returned in the Vanda from a valetudinarian tour to the West Indies, also, confirms the preceding account:

Ulster County, ss.

George H. Wells, of Wyalosing, Bradford County, Pennsylvania, came before me, J. S. M'Entee, a Justice of the Peace, of Ulster County, and being duly sworn, saith: I came a passenger in the Schooner Vanda, from St. Martin's to this place. Previous to our leaving St. Martin's, the mate of the Schooner Vanda, who was also a brother of the captain, was sick

about five days, and died of typhus fever, as it was there called. I saw him the day he died, and attended his funeral, and saw him after he was dead, and I think he looked perfectly natural, and heard several remark that they did. Maj. Fields, the supercargo of the said schooner was also sick at St. Martin's, and I took care of him, or helped take care of him until he recovered; and I did not hear any one say that either the mate or the supercargo had yellow fever, or that there was any yellow fever at St. Martin's; and I further say that the two cases I have mentioned were the only cases of sickness that I heard of at St. Martin's. I consider it a very healthy place. I went out for my health, and think I improved while there. The physician of the port gave the master of the Vanda a certificate of good health, stating there was no contagious disease on board, well knowing at the time the two cases of sickness which I have mentioned. One of the seamen had been unwell at St. Martin's; got better, but was not able to do duty, but kept about decks, and remained so during the passage. About ten days out, the steward got sick, eating pine apples, which he said himself. Those two men were taken off at Quarantine, and were both put into a warm bath, and scrubbed; and the next day I saw them, and they appeared to be quite smart, and wanted beef. The schooner's cabin, state-room, and store-room, and forecastle, were all thoroughly overhauled and cleansed, by order of the health officer. After we had remained at Quarantine forty-eight hours, we proceeded up the North River to this place, where we arrived in four days after we left Quarantine. After we arrived at this place, the captain and mate were taken sick. The captain took lodgings at the Mansion House, and the mate staid on board. Until the Vanda sailed, a day or two after we arrived at this place, I began to feel more unwell; and the fourth day after our arrival I came to the Mansion House. Up to this time I had remained on board of the Vanda. I continued quite sick for about four days after going to the Mansion House, since which time I have been gaining, and am now quite able to proceed on my journey to my home in Bradford county, Pa.

These facts I have been induced to state under oath, in consequence of the excitement in this place on the subject of the Vanda's being supposed to have brought a contagious disease from St. Martin's.

G. H. Welles.

Sworn and subscribed before me, this 28th day of August, 1843.

J. S. M'Entee, J. P. of Ulster County.

The subjoined affidavit by John Riley, the chief mate of the Vanda, is of similar import:

Richmond County, ss.

John Riley, of the City of Baltimore being duly sworn, doth depose and say, that he arrived in the port of New York, in schooner Vanda, on the 7th August, of which vessel he was the chief mate at the time of her arrival at this port. Deponent further says, that he shipped on board said schooner at the port of Baltimore, and continued in that capacity until the arrival of said schooner at the port of St. Martin's, where the chief mate died of Typhus fever. Deponent further saith that said chief mate sickened before the arrival of said schooner at the port of St. Martin's, and was immediately sent on shore upon his arrival at said port. Deponent further saith that one of the crew sickened, while at St. Martin's, but not of fever; and in all other respects, the crew of said schooner was perfectly healthy; and he further saith that said schooner was at St. Martin's ten days, and that during said time, deponent did not know or hear of a case of fever or sickness of any kind, except the mate and seaman aforesaid of the schooner Vanda; and upon leaving the said port of St. Martin's, the schooner received from the authorities a clean bill of health. At the time of the Vanda's arrival at the port of New York, two of the crew were sick, and landed at Quarantine.

his

John ⋈ Riley.

mark.

Subscribed and sworn before me this 30th day of August, 1843.

Henry B. Metcalf, Commissioner of Deeds.

As the following affidavit bears testimony to the continued salubrity of St. Martin's at as late a date as the 11th of August, it also deserves a place here:

Robert Porterfield being duly sworn doth depose and say that he is the Captain of the brig Carib, which vessel sailed from New York to Demarara on the 29th of June last, with a cargo of provisions, and arrived there July 20th, discharged cargo, took in ballast and sailed for St. Martin's, August 1st; arrived there August 5th, took in cargo of salt, and sailed for New York August 11th, with the same crew as sailed from New York; have had no sickness on board the brig the voyage round, and all the before named ports were perfectly healthy. And deponent was informed and believes that no case of Yellow or Malignant fever had occurred at St. Martin's during the present season.

Robert Porterfield.

Sworn before me this 30th day of August, A. D., 1843.

Andrew J. Roe, Commissioner of Deeds.

We would here remind the reader that the Vanda, however healthy it may have been at St. Martin's, also underwent exposure at Point Petre, where yellow fever often prevails extensively even earlier in the year than when the Vanda was there. She, however, sailed from this port for St. Martin's *in ballast*. Before, however, proceeding from the New York quarantine to Rondout, the Vanda's forecastle was white-washed, the vessel ventilated and purified as far as practicable, and the clothing and bedding washed; and what is also important to be borne in mind, is, that she had nothing in her hold but salt, which cannot be supposed to harbor infection. Her pine-apples were contained throughout the voyage in a long boat above deck; Welles, the passenger, having amused himself day after day in picking out and throwing overboard the rotten ones.

According to the official record, she had a sixteen days' passage from Point Petre, Guadaloupe, via St. Martin's. The whole number of persons on board on arriving at the New York quarantine, was seven; officers and seamen, six, and one passenger. The port of Point Petre sickly.

Now as the persons on board the Vanda were a thousand times more exposed than others, supposing her to have been a highly infected vessel, it follows that the type of their diseases should have been correspondently grave. A detail of these cases, as they occurred at Rondout, therefore, becomes necessary.

Case I.—*Pearce*, the Captain of the Vanda, from Bangor, Maine.—He took sick on the 14th of August, being the day on which the schooner arrived at Rondout. He was treated in part by Dr. Wales, but chiefly by Dr. Stringham, both being physicians of Rondout. The earliest symptoms were lassitude, prostration of strength, loss of appetite, pain in the head and back, and yellowness of the eyes. The true nature of this case was at once recognized by Dr. Stringham, upon whose general intelligence and powers of medical observation we would freely rely. Of an inquiring and philosophic turn of mind, Dr. S. has for years been accustomed to study the peculiar character of the diseases of each season, as a guide to the general treatment of every disease; and thus he had observed that all diseases for the several past months, especially all cases of influenza, were gradually assuming the *bilious remittent type*. Now, although this epidemic had nearly ceased altogether, yet, as Captain Pearce had just returned from a foreign country which had

not yet been reached by this wide-spreading disease, he, according to a well known law, may have possessed a susceptibility to the cause which had either now become diminished in virulence, or had expended its force on all those susceptible to the impression. Dr. S. consequently pronounced the case one of *influenza*, having the bilious remittent form.

On the second day, Dr. S. found the captain with considerable febrile excitement, tongue coated with a brownish fur, pain in the head, back, and limbs, with a slight degree of delirium. The treatment consisted chiefly in general blood-letting and mercurial purgatives, followed by salts and senna or castor oil. On the fourth day, he had a free epistaxis, which seemed to relieve the pain in his head and the fever generally; and this bleeding from the nose continued on the fifth and sixth days. He complained much of that peculiar prostration which marked the recent epidemic influenza, and also with the other characteristic of yellowness of the tunica conjunctiva. On the 25th, having recovered sufficiently, he set out for his home at Bangor. Now this case was devoid of all features even analogous to those of yellow fever.

Case II.—*George Welles*, the passenger on the Vanda.—It has been already seen, in his affidavit, that this individual had a similar disorder, but in a slighter degree. He says that he staid on the schooner until the fourth day, when he went to McEntee's hotel, where Dr. Stringham first saw him. On the third day after this, as we are informed by Dr. S., the fever had subsided altogether, and the patient presented the same symptoms as in the case of the captain—those bilious symptoms which had been still more strongly marked in many cases of influenza that had occurred prior to the arrival of the Vanda. In this case as in the former, when the febrile symptoms had subsided, there was a preternatural slowness of the pulse, perhaps 50 in a minute. On the 29th of August, he left, *well*, for his home in Pennsylvania.

Case III.—*Riley*, the mate of the Vanda, whose affidavit also appears on a preceding page.—This man who was similarly affected, was treated by Dr. Wales, by bleeding, purging, and diaphoretics. His recovery was rapid. Like a true sailor, he attributed his disease to having come within fresh water.

Case IV.—*John Baily*, the North River pilot.—In regard to this man, it appears, according to the affidavit of Dr. Stringham, that he was seriously sick before going on board the Vanda to pilot her down the river; and this we also learned from Justice McEntee, the proprietor of the Mansion House at Rondout. He says that, while the Vanda lay there, Bailey went to New York in a steamboat; and that coming back in the night in his shirt-sleeves, he got wet, and that he took sick immediately after, and fainted when he attempted to rise from his bed to go on board the Vanda. He was sick two days at Rondout, five days on the Vanda while she was returning to Quarantine, and four days in the Quarantine hospital, when he died.

The following account of his case, we received at the Quarantine hospital:

"The symptoms were—a quickened pulse, tongue furred, brown in centre and dry, skin dry, thirst, and great prostration; no tenderness over the region of the stomach and liver. Once his stomach rejected a dose of castor oil; but with this exception, *he did not vomit. At no time previous or after death, was his skin tinged with yellow.*

"Bailey was forty years of age, lymphatic temperament, and addicted to the habitual use of ardent spirits, having often regular *sprees*—altogether a most unfit subject for any form of fever."

Now these are the cases that occurred on board the Vanda, the supposed hot-bed of infection! And these are some of the cases upon which was built up the excitement of the yellow fever panic! As there was nothing in the hold but salt, as the pine-apples were upon the deck during all the voyage, and as the cabin below deck was occupied by the persons on board, it follows that their exposure to any infectious causes that might have existed on board the Vanda, was perhaps not less on the voyage than when she was being unloaded at Rondout. At all events, these persons underwent the fullest possible exposure, and yet they had scarce a symptom peculiar to the yellow fever.

Of Dr. H. S. Stringham's character as a physician, who has practised at Rondout for the last ten years, we have already spoken. The other physician living in the town is Dr. John Wales who quite recently arrived there from Ireland; but there is a third, Dr. Richard Elting, who though living on the opposite side of the Rondout, has been a practitioner of high repute in the village for the last twenty years. It is upon the testimony of these medical men that we rely for the facts that did not come under our own observation.

Of the four cases detailed above, the first three are evidently cases of bilious influenza, while the last which proved fatal, seems to have been produced by intemperance and exposure. As the first three cases, as respects the symptoms of yellowness of skin and the eye, the vomiting of bilious matter, and vital prostration, were even less marked than others observed by Drs. Stringham and Elting, for a month or two prior to the arrival of the Vanda, more especially as the symptom of the depression of the powers of life had characterized in a peculiar degree all cases of the epidemic influenza which had just ceased—a character belonging, too, to all previous epidemics of the same kind;—under these circumstances, we repeat, that Dr. S. concluded legitimately that they were cases of influenza occurring in persons not previously exposed to the cause. The opinion that the Pilot's case, which alone proved fatal, was not of the same character as those which proved fatal at Rondout, is favored by the fact, as will be seen hereafter, that his period of sickness is fully twice as long as the average of those at Rondout.

Among a number of cases of this kind related to us by Dr. S., it will suffice to refer to that of Captain Hathaway of the sloop Delaware; and him we select, because he is a man of intelligence and well known in the community.

As early as June, he was attacked with the bilious remitting form of influenza, characterized by extreme yellowness of the skin and eye, free vomiting of a dark bilious matter, resembling what was subsequently designated as "*black vomit*," and also by great vital depression.

As the season advanced, the bilious remitting type of disease gradually evinced itself more strongly at Rondout and the vicinity; but no case complicated with malignant symptoms appeared, until the latter part of August. Those occurring on the Vanda were of the ordinary form, which had been repeatedly witnessed during the season. Robert Grove, for example, attended by Dr. Stringham, left Rondout two days before the arrival of the Vanda, and when he returned, the schooner

had departed; and yet he had all the peculiar symptoms with the rest who were attacked.

The practice of Dr. Elting also abounds in similar cases. He visited a boy at Rosendale, nine miles from Rondout, whom he found with all the symptoms of the disease, including yellowness of the skin and tunica conjunctiva, injection of the vessels of the eye, epigastric tenderness, preternatural slowness of the pulse, and great vital prostration. He was attacked on the 19th of August, the day on which the Vanda left Rondout, but he had had no connection with the village while the schooner was there, nor for months previously. He saw none of the pine-apples; and it may be added that no one of the family had had any intercourse with Rondout for a considerable length of time. It was on the fourth day of his disease that Dr. E. saw him in this prostrated condition, and yet he recovered under the use of very powerful stimulants.

Another interesting case was that of Abraham Slate, the son-in-law of Dr. Elting, who was attacked two or three days prior to the coming of the Vanda. He was taken with violent pain in the head and back, nausea, and vomiting of bilious matter. His eyes were yellow, with the vessels injected; his skin had a yellowish cast, like the color of a lemon; there was epigastric tenderness; when the fever began to subside, there was great prostration; and now the tongue, which from the first had been covered with a yellowish fur, had a red tip and scarlet edges. Afterwards, as the fever subsided, the centre of the tongue presented a dark streak. This was a true bilious remittent fever. Calomel was administered largely in the early stage; and when the sinking stage supervened, quinine and wine were used. The patient recovered. Mr. Slate resides on the river opposite to Rondout.

Another strongly marked case in the practice of Dr. E., was that of A. Tichner, who was attacked two weeks before the arrival of the Vanda. The symptoms were the same as in Slate's case, only there was a greater prostration of strength. A fortnight prior to his attack, he had had influenza, by which he was much prostrated; and resuming his mechanical avocation before his strength was sufficiently restored, the *peculiar* symptoms supervened. There was great yellowness of skin and eye, the eye being also much injected, while the slowness of the pulse was very marked, being as low as forty.

Two months before this, Dr. E. had been called in consultation with Dr. Thomas M. Holt, who resides five miles from Rondout. In these cases, he says that the symptoms were most decidedly of the same character as those of Slate and Tichner, including the preternatural slowness of pulse. Besides, James Martin and Mrs. Teerpening, two of these patients, residing six miles from Rondout, had the vomiting of a bluish colored, and sometimes dark, fluid, which he alleges differed in no respect from that which was observed subsequently at Rondout, and was heralded to an excited public as the *veritable coffee-ground black vomit of imported West India tropical yellow fever!!*

Were it deemed necessary, we could present a score of well-authenticated cases, occurring before the arrival of the Vanda at Rondout, every one of which was more strongly marked than those which appeared on board the schooner, regarded as teeming with the seeds of pestilence and death.

Although it is unusual to present, in an investigation of this kind,

testimony under the solemnity of an oath; yet, as we have access to the affidavits* of Drs. Elting, Stringham, and Holt, declaring the truth of the facts above detailed, their introduction here will serve to impress more strongly upon the reader the truth of what we have already averred upon their authority.

Affidavit of Henry S. Stringham, M. D.

County of Ulster, ss.

Henry S. Stringham, of Rondout, physician, being duly sworn, saith, That this deponent has been engaged in the practice of medicine at Rondout about ten years. And this deponent further saith, that since the 8th of June last, and earlier, and previous to the arrival of the Vanda at Rondout, he attended professionally in many cases of fever partaking of all the general characteristics of the present disease; and this deponent further saith, that he is now attending Robert Grove, an Irishman, in whose case all the prominent symptoms of the prevailing epidemic are fully developed, being similar to those which occurred before the Vanda arrived. Said Grove informed this deponent that he had been absent from Rondout since the 10th inst., (previous to the arrival of the Vanda,) and returned on Monday, 20th inst., (after her departure,) having had no communication with that vessel; and this deponent unqualifiedly asserts that he had attended cases previous to the arrival of the Vanda, between which and the present form of the epidemic, he thinks it impossible to discriminate. And this deponent further saith, that Mr. Bailey, the North River Pilot, sickened previous to his going on board of the Vanda to pilot her down the river, and that he was attended by this deponent, who, as the pilot was in a very debilitated state, advised him not to leave home.

And this deponent further saith, that he has seen nothing in the cases of the prevailing epidemic corresponding to his ideas of yellow fever, as gathered from his medical readings.

HENRY S. STRINGHAM.

Sworn this 31st day of August, 1843, before me.

J. S. M'ENTEE, Justice of the Peace.

Affidavit of Richard Elting, M. D.

State of New York, county of Ulster, ss.

Richard Elting, physician, being solemnly sworn, doth depose and say, that having practised medicine in the village of Rondout and its vicinity for the last twenty years, he is well acquainted with the character of the diseases in that neighborhood. This deponent further saith, that some time previous to the arrival of the schooner Vanda at Rondout, a bilious remittent fever of a severe type appeared at that place, having also in some cases the prominent symptoms of the epidemic influenza then prevailing there. That the schooner Vanda arrived at Rondout on Monday, August 14th inst.; and that subsequent to the arrival of the Vanda, this deponent was called in consultation to see Captain Pierce, the master of that vessel, whose case presented the same symptoms which appeared in several cases previous to her arrival. And this deponent further saith, that he has been called professionally to visit a number of persons who have sickened since the arrival of the Vanda, all presenting the same symptoms that existed previous to her coming. In one instance this deponent visited a patient of the same description nine miles from Rondout, who had not had, as far as this deponent could ascertain, any communication with Rondout; and that in another the patient had been on board of the Vanda, and his case presented the same symptoms found in those who sickened previous to her coming.

RICHARD ELTING.

Sworn this 31st day of August, 1843, before me.

J. S. M'ENTEE, Justice of the Peace.

* These affidavits have reference to the question of a violation of the Quarantine regulations, on the part of the Health officer, in allowing the Vanda to proceed to Rondout.

Affidavit of Thomas M. Holt, M. D.

Ulster County, ss.

Thomas M. Holt, physician of Esopus, Ulster county, being duly sworn saith, That he has practiced medicine in the said town for the last twenty-six years. And this deponent further saith, that several weeks prior to the the first day of August inst., he attended a patient residing in this town, about five miles from Rondout, having the following symptoms: Violent pain in the head and lumbar region, eyes extremely yellow and inflamed, the skin yellow, the tongue dry and parched, thickly coated with yellow fur, with the edges of a scarlet color, pain in the pit of the stomach, vomiting of dark bilious matter, sometimes of a bluish cast, dark bilious evacuations, succeeded by great prostration of strength. The patient, a female, had not been at any place from home for sometime previous to her attack. She recovered. A similar disease occurred in the case of a Mr. Martin, about six miles south of Rondout, who was attended by this deponent about the same time, and who also recovered.

This deponent further saith, that he considered said disease to be severe bilious remittent fever, similar to a disease which prevailed very extensively in this vicinity some fourteen or fifteen years since; over thirty cases occurring within a mile of his residence. From the general description of the diseases prevailing at Rondout, this deponent has no doubt that it is the same character of fever which he has just mentioned as occurring some fourteen years since, which disease appeared in the months of August and September. THOMAS M. HOLT.

Sworn this 31st day of August, 1843, before me.

PETER M. DECKER, Justice of the Peace.

This evidence, in connection with that afforded by the private communications made to the Board of Health of this city, proving the existence of a disease of the same character in other localities, which will be presented in the sequel, all tends to show that the fever at Rondout is an epidemic; and this epidemic, on referring to the medical history of the past, would seem to have a close relation with the recent wide-spread influenza, peradventure constituting a morbid *diathesis* which modifies the character of all other diseases.

The fact that the influenza assumed a bilious type elsewhere, is proved by the following communication from Dr. Richard H. Coolidge of the medical corps of the United States army, addressed to Dr. Alexander F. Vaché. His cases have reference to the troops stationed at Fort Fairfield, on the Maine frontier—the late "disputed territory;" while at Newport, Rhode Island, the disease among the troops had features of the same kind so decidedly marked, that the surgeon of the post reported them to the Medical Bureau at Washington, under the name of "*Bilious Catarrh.*"

The patients [at Fort Fairfield] complained at first of slight soreness of the throat, cough, and dyspnœa; loss of appetite, headache, pain in the loins, together with an unusual depression of spirits, and an unwillingness to make the least exertion. The pulse varied little from the natural standard, and if any thing, it was less frequent and more feeble. Pain, increased on pressure over the epigastric and right hypochondriac regions, was a frequent symptom. If the disease was allowed to take its own course, emesis was sure to occur; the fluid ejected being in mild cases pure bile, but of a *green hue*, in the more severe.

In a majority of the cases, an emetic, followed at night by a dose of calomel, and Dover's powder, was sufficient to remove all the symptoms, except the cough, and dyspnœa, which readily yielded to the application of cups or sinapisms to the chest, and to the use of some stimulating expectorant.

One of the severest cases occurred in a sergeant of temperate habits, but with a constitution enfeebled by a severe attack of intermittent fever, while serving in Florida two years since. During the day he complained of the symptoms

enumerated above, the lassitude and debility being more marked than in any other case. At midnight he had a chill, which continued two hours, followed by a slight fever. In the morning when I first saw him he was free from fever, pulse slow and feeble, tongue covered with a dry white fur; he complained of great debility, being hardly able to raise himself in bed. There was intense headache, nausea, and pain on pressure over the stomach and liver. While standing at his bed-side, vomiting came on, the fluid ejected being pure bile; no food had been taken for 24 hours. Ten grains of calomel were administered and cups applied to the epigastric region; this arrested the vomiting for the time, but towards night it returned, the fluid now ejected having a *dark green hue*. Cups were again applied, and calomel and opium administered. The bowels not having been moved, an enema was directed, after the operation of which there was no recurrence of the vomiting. The febrile paroxysm returned daily for a week, at which time they were arrested by quinine.

Two more severe cases occurred; they were so much alike that a description of one will be all that is requisite.

A private, who during the day had complained of the usual premonitory symptoms, was attacked in the night with vomiting. The emesis was so violent and long continued that I was sent for. I found him vomiting a *dark green fluid*, but was told that the contents of the vessel just removed were yellow.

The disease presented similar features at this port, so much that Surgeon R. S. Satterlee has designated it "Bilious Catarrh," in his official report. No local cause, capable of modifying the disease exists in the vicinity of either post.

The same fact has been observed at Binghamton, in the western part of this state, as appears from an article in this Number of the Journal, from N. S. Davis, M. D.

"Out of one hundred and fifty or two hundred cases of this disease," he says, "I have not seen one that was not accompanied by more or less *biliary* derangement, as manifested both by the symptoms and the character of the evacuations."

Under ordinary circumstances, the evidence here presented would be decisive as regards the *indigenous* nature of the malignant fever of Rondout; but in the present instance, it becomes requisite to pursue the inquiry into all its ramifications. This investigation, however, will still more clearly establish the conclusions already warranted, as respects any supposed agency exercised by the Vanda in the production of this disease.

The Vanda lay at Rondout five days, having arrived there on the 14th and left on the 19th of August; and it was only the cases that occurred after her departure that assumed the *malignant* form. As most of the cases were in persons who resided, or had worked on the "strand," which has been already described as the low ground of three or four hundred yards in extent, bordering on the river, and which constitutes the business-part of the village, and as the Vanda had occupied a place close by the wharf, about midway along the strand, it may be well, before entering upon the details of these cases, to present certain statistical facts derived mostly from the records of the Delaware and Hudson Canal Company.

The Vanda is a large-sized schooner of 210 tons burden, laden, on her arrival at Rondout, with 3500 bushels of salt thrown loosely into her hold, and with perhaps 3000 pine-apples, more or less in a state of decay, the latter being contained, as before stated, in a small boat upon deck; and these apples, with the exception of some sold from

the vessel, were transferred to Barlow's store on the day of arrival. As it has been alleged that the unloading of the Vanda—the throwing open of her hatches—contributed particularly to the dispersion of a morbid poison, these circumstances have been inquired into with much minuteness.

As regards the pine-apples, it is admitted on all hands that, independent of the effect that would be produced by eating the same quantity of any other decaying fruit, as for instance colics and diarrhœas, nothing unfavorable ensued; for those who eat most, in many cases, suffered no inconvenience whatever, while some of the severest, aye fatal, cases are found among those who had not even tasted them, or had partaken but in a very moderate quantity. Moreover, as the apples had been at no time below deck, their innocence, as regards the throwing open of the hatches, is quite obvious enough.

The terrible consequences of the *throwing open of the hatches* must have reference, therefore, to the unloading of the salt alone. Now, independent of the universally admitted disinfecting power of chloride of sodium, and without reference to the circumstances already stated, that the schooner underwent at quarantine whitewashing, ventilation, and other means of purification, let us inquire statistically into the facts connected with the *throwing open of her hatches.*

In getting out the salt, as many as fifteen men, besides two persons connected with the Custom-House at New York, were engaged part of the time, but sometimes there were not more than ten at work, including two of the crew. Subsequently in loading the schooner, three men were engaged in trimming her, that is, in stowing away the coal under deck. Now of these *twenty* persons, but *one* took sick; and this one did not enter the hold, but simply wheeled the salt, after it was hoisted from beneath the *terrible hatches*, into the warehouse!

On this point we may add another fact, viz., that on the 19th of September, we, accompanied by Col. J. T. Hendricks of Rondout, entered the warehouse containing this same salt, the door not having been unlocked since the departure of the Vanda on the 19th of the previous month. We spent some time in selecting large specimens of its crystals, many being more than an inch in diameter. It proved no more infectious than did the opening of the hatches.

As figures have the reputation of generally telling the truth, we shall avail ourselves still farther of the records of the Delaware and Hudson Canal Company. When the Vanda came first to the dock, she lay in the centre of 42 vessels and other craft, that had arrived before her, and which were now waiting, each her turn, to take in a cargo of coal: the crew of each of these averaged four men. The Vanda was also surrounded by 52 canal-boats, which had just arrived from the coal-mines, each boat averaging three men. Here she lay five days, during which period 44 vessels and 266 canal-boats arrived, these taking the berths successively of those that were leaving. The total of the crews of the above named vessels is not less than 1300 men, three-fourths of whom certainly came within a few feet of the Vanda. This must have occurred in one of three ways. In consequence of the peculiarity of the channel and the position of the Vanda, both the boats bringing coal and the schooners carrying it off, would necessarily come near her. If the schooners loaded from the wharf, each one would press upon the Vanda, in order to secure the required position for passing up the channel;

for if not there, the vessel lost the privilege of priority in loading. Again, if the coal was taken directly from the boats which brought it from the mines, there was still a necessity to pass the Vanda once if not twice. And, thirdly, as the majority of the boatmen come down the strand in the way of business, each one may, in doing so, as the Vanda lay against the wharf, have passed within a yard of her. All these points we made the subject of strict inquiry among merchants and others on the wharf.

This statement refers exclusively to the business of the Delaware and Hudson Canal Company; but there are other establishments at Rondout which receive and forward freight daily, by which the communication of strangers was still further augmented. But among the 1300 men thus actually exposed to the Vanda, if at all infectious, there ought to have been some evidence of the peculiar disease which at this time prevailed at Rondout.

The ports to which the schooners belonged, which took in coal during the five days that the Vanda lay at the wharf, are the following: Hudson, Brookhaven, Albany, Falmouth, Newburgh, Orient, Taunton, Norwich, Port Chester, Sandwich, Rahway, Haddam, Aquackanack, New York City, Tarrytown, Boston, Rhinebeck, Stonybrook, Stamford, Poughkeepsie, Hartford, New Hamburg, Stockport, Packetuck, New Haven, Blue Hill, Salem, Lyme, Waterford, Chatham, and Troy. Some of the schooners lay in turn actually in contact with the Vanda; and as these places occupy points extending from Maine to New Jersey, it is rather unaccountable, admitting the Vanda, for the sake of the argument, to have been a point of infection, that no evidences of the disease have appeared at any one of these various and remote points, traceable through these schooners to the Vanda; and this reasoning appears in stronger contrast, if we suppose the Vanda to have infected the persons who took the disease on shore, some of whom resided or did business several hundred yards from the schooner, as well as others who had never seen her!

These investigations were made on the 6th September; and between this period and the 19th of the preceding month, the day on which the Vanda sailed, there arrived fifty vessels and 229 canal-boats, (the number of canal boats being diminished by an interruption of the navigation for nine working days, caused by a breach in the canal.) These crews give a total of 887 men from foreign places, exposed to the atmosphere of Rondout during the seventeen days following the departure of the Vanda; and yet there is no case known of the disease having been communicated. At the same time, it is obvious that a person visiting this locality must have run a risk not unlike that of being exposed to one in which fever and ague abounds. The cases of Jessup, of Piermont, and of Mather, attached to the steamer Victory, would seem to have thus arisen.

Moreover, from the arrival of the Vanda, up to this same period, the 6th of September, not a case of any disease occurred among the 150 laborers, employed daily in the coalyard of the Company, in loading vessels and unloading canal-boats.

It would thus seem sufficiently established that no proclamation of non-intercourse as regards the Vanda, was required on the part of the city of New York; and that it was hence merely re-enacting the solemn farce of the Roman snake-story.

It is due, however, to the Board of Health, to say that they were compelled to act as they did. The Mr. Romeyn of Kingston, spoken of in the proceedings of the Board of Health, as having announced the existence of yellow fever at Rondout, committed the unfortunate mistake of sending his letter to the editor of a daily paper in this city, instead of the Board of Health; and the editor perpetrated the same blunder, by publishing it to the world. As the information was thus prematurely given to the public, in anticipation of any action on the part of the public authorities, the Board of Health was forced into the measure of a proclamation of non-intercourse, in order to allay the excitement produced by this quixotic proceeding. Upon this point, the words of the Mayor of New York, De Witt Clinton, in 1805, ought to be carefully treasured up:

> The universal alarm excited by the existence of this disease, the serious injury to the commercial and agricultural interests of the community, and the extreme inconvenience to our fellow citizens in particular, renders it necessary that the evil should absolutely prevail before it is acknowledged. On the other hand, it is due to the health as well as the security of the lives of our citizens, to apprise them seasonably of the calamity, which menaces them.

To conclude the history of the Vanda, it may be added that she proceeded to her home at Bangor, Maine. The story of her leaving a sick man at Newport, Rhode Island, turned out to be all a fabrication; and we are told in a Bangor newspaper, that the Bangorites, dwelling in a hyperborean region never visited by *yellow Jack*, received the persecuted schooner, unlike the Gothamites, in a spirit of paternal kindness, allowing her to cast her anchor in their midst.

But the alarmists were not content to introduce yellow fever by means of the Vanda, but must needs increase the panic by giving it a *contagious* character, that is, a capability of being transmitted from one person to another by mediate or immediate contact. Knowing that the system of quarantine is deeply rooted in the fears and ignorance of the populace, this could not but have its expected effect; but fortunately so few of the profession believe in the contagion of yellow fever, that they may safely be allowed to enjoy their own opinions, incompetent to do much harm, except on occasions like that of the Rondout fever.

We here feel it due to the occasion to bestow a passing tribute of respect upon the memory of the great Chervin of Paris, who has paid the debt of nature quite recently. By him was conceived a plan, the most wise and the most vast, that ever was formed by a medical man for the interests of humanity, and by him was it thoroughly executed. The commission appointed by the Academy of Sciences in Paris, in 1827, to adjudge the prize designed for labors in medical science, states that he collected the evidence of hundreds of medical men in all parts of the world where yellow fever is known to prevail; and thus impelled by his ardent philanthropy and at the sacrifice of his patrimony, he accomplished voluntarily, let it be said to the honor of humanity, what a powerful government could scarcely hope to obtain at great expense. "He visited," according to the report of this commission, "in eight years, all the colonies belonging to France, England, Spain, Holland, Denmark, Sweden: he visited all parts of North America, where the yellow fever has shown itself, from New Orleans to Portland, in the state of Maine; so that from Cayenne to this last place, he traversed over and made investigations in thirty-seven degrees of latitude."

After the ample evidence afforded by this medical missionary and able investigator, who, as he proceeded from place to place, most clearly established the error of attributing to contagion what should be ascribed to the infection of local causes, it seems strange that any advocate of the opposite opinion should still be found. We have not space even to state the conclusions, much less any part of the details, of Chervin's gigantic investigations. Suffice it to refer to several facts. It is a custom throughout the United States for the inhabitants of towns, whenever the yellow fever appears in them, to fly to the country, but in no instance has the disease ever been propagated out of towns, This is yearly exemplified at New Orleans; and here, notwithstanding the fatal *black vomit* appears on the decks of steamers, the disease is never manifested among fellow-passengers who have not been exposed to the infected district. A signal refutation of the supposed contagious nature of this disease, is likewise afforded by the city hospitals, established in the vicinity of New York and Philadelphia, inasmuch as those employed about the sick had, in no instance, the disease communicated to them. Again, when this occasional visitant appears in this city, in Philadelphia, and elsewhere, the fact that it can be confined to certain parts, as the wharves and streets nearest the river, by appropriate barricades, affords evidence the most satisfactory of its local origin. Indeed, the disease has often been found limited to one side of a street, to one story of a house, or to men whose berths were on a particular side, or in a particular part of a ship. Lastly, it has been satisfactorily demonstrated that the disease is not propagated by the nearest communication with the bodies of the diseased, by inoculation with the blood of persons in the worst form of the disease, by drinking the black vomit, etc.

In the "History of the Malignant Fever" of 1805, in New York, many facts are contained in illustration of some of these points, as for instance the following:

The Board have formed a decided opinion, that the principal seat of the prevailing disease is that part of the city included between Burling-slip and Old-slip as far west as Pearl-street. Almost all the cases of disease, which have occurred, can be distinctly traced to a communication with that part of the city. It is matter of extreme regret, that the repeated admonitions of the board, to remove from this quarter, have been disregarded by a number of individuals who have remained the self-devoted victims of disease and death. They conceive it their duty again to enjoin it upon their fellow-citizens, who have continued there, to remove immediately. To obviate every plea of necessity, and to discharge the duties they owe to humanity, the board have erected buildings for the reception and accommodation of the indigent, at Bellevue gate, where they will be supplied with provisions by the Commissioners of the Alms-House. Such as are able to remove without assistance, are enjoined to go into the country, and not into the healthy parts of the city. The board will consider it their duty to interpose and prevent such removals, which have excited the apprehension of a number of worthy citizens, who regard their health, as thereby exposed to imminent danger.* Persons have been engaged in these practices, who ought to know better, and who, unless their conduct be changed, will become the objects of severe reprehension and public indignation. All persons who do not

* This alludes to two gentlemen who resided in healthy parts of the city, each of whom had taken a sick person into his house, from places deemed infected. One of these died; but it is a fact, that no individual in either family sickened in consequence thereof. All the neighbours likewise, continued to enjoy good health.

comply forthwith, with this advice of the board, to remove from the above described part of the city, *which is deemed the principal seat of the disease, and which does not contain more than* 33 *acres*, will be considered guilty of a wanton exposure of their lives, and will justify the board in resorting to compulsory measures.

By order of the Board of Health,
DE WITT CLINTON, President.

JAMES HARDIE, Sec'y.

In the farewell address of the Board to the public, this point is again particularly referred to, in the following words:

To the voluntary removal of the healthy from the infected parts of the city, the Board in a great degree, ascribed the comparative fewness of deaths, which have occurred. In the expediency of this step all parties concurred.

Again, it is remarked:

It is remarkable, that during the different seasons, in which the city of New York has been afflicted with pestilential fever, the Alms House, Debtors' Apartment, Bridewell and State Prison have almost been totally exempt from that calamity; and that when any solitary case of such fever has occurred in either of these buildings, in does not appear even in a single instance, that the disease has been communicated from one to another.

Upon this point, our evidence is, in truth, cumulative. Thus it is remarked by Professor Eberle:

Indeed, if yellow fever did possess the power of generating its own virus and communicating itself by contagion, the fact, as Doctor Bancroft observes, must have been proved ten thousand times by the most irrefragible testimony, and yet, there is perhaps no *incontestible* case on record where the disease was thus communicated. * * * But although yellow fever be not contagious, it may, no doubt, be introduced into sea-ports in ships. Unquestionably, a pestiferous miasm may, under *favorable* circumstances, [*but not when, like the Vanda, having salt alone in the hold,*] be generated in the holds of ships while navigating in hot climates, which, when suffered to escape at the wharves, may give rise to the disease in question. When the miasmata are thus introduced, however, the disease engendered by it will not prevail epidemically, but only among those who approach the infected vessel, or the cargoes, and will disappear entirely when these are removed to a distance. (Bancroft.) The sporadic cases which occurred at the Wall, about 1804, at Perth Amboy, in 1811, at Middletown, Connecticut, in 1819, and at New York, in 1824, were distinctly traced to vessels that had recently arrived from warm climates. The circumstances of the ship Ten Brothers, at Boston, in 1819, afford a striking example of the production of deleterious miasm in the holds of ships, capable of producing yellow fever.* This vessel having arrived at Boston on the first of August, a number of persons went on board while the cargo was being discharged; and out of these, twelve individuals, living in various parts of the city, were seized with malignant fever, nearly all of whom died. The disease was not, however, communicated to a single person of those who visited the sick.

By Dr. W. Fergusson, Inspector General of Hospitals in the British army, a gentleman of great experience, tact, and candor, much valuable information upon yellow fever has also, within recent years, been furnished. He speaks of this disease as it prevailed among the crew exclusively of the Regalia transport, when, in 1816, it was employed in carrying black recruits from the coast of Guinea to the West Indies; the blacks having, in a great measure, a natural exemption from the disease.

* Medical Recorder.

"The ship," he says, "on her arrival at Barbadoes, was not put under restraint or quarantine, but communicated freely with the sea-ports of Barbadoes, the Saints, Antigua, and Guadaloupe; landing the severally ill or dying subjects of that disease amongst the inhabitants, and at the hospitals at Barbadoes and Antigua, without communicating infection at any of these places; and finally, after having undergone a thorough purification, sailing from Guadaloupe for Europe, crowded to a very great degree with rebel French prisoners and their families from the jails, under the most dangerous circumstances of health, with a case of yellow fever actually dying on board the day before she left Basseterre roads, but without communicating any such fevers to the unfortunate passengers, leaving any behind her at Guadaloupe, or importing any at the ports she ultimately reached."

Speaking of an epidemic yellow fever which occurred the following year, Dr. Fergusson remarks—

what a different interpretation the facts I have collected would have borne, had the present epidemic which afflicts the islands broken out in the ordinary course of the seasons, a year earlier, at the time the Regalia was here.

Here, then, notwithstanding a mere coincidence, it would have been alleged as undeniable that the disease had been imported from Africa; and, in like manner, at Rondout, the coincidence of the existence of a violent form of malignant fever and of the presence of the schooner Vanda, is made to assume the relation of cause and effect.

In the United States, up to the year 1793, almost the whole profession were believers in the communicable nature of yellow fever; but each successive epidemic seems to have swept off the contagionists, while nearly all the younger members have come into the profession disbelievers. The following extract bearing upon this point, we take from the "Cyclopædia of Practical Medicine:"

The public manner in which the celebrated Dr. Rush, once a believer in contagion, retracted his opinion, after farther observation, is matter of historical notoriety. At New York the doctrine of contagion is still ardently supported by two physicians in particular—Professor Hossack and Dr. Townsend—who have both written much upon the disease. The facts which presented themselves to Dr. Beck in the course of the last epidemic at New York (1822), caused his public retraction of faith as to contagion in the following year;* and Dr. Townsend appears to have admitted† that, of about two hundred persons of all grades of the profession in that city, *three or four only* believed lately in the transmissible nature of yellow fever. "In 1793 the profession were almost unanimous in the belief of its contagious character, and no little courage was required to brave the storm an opposite opinion would have awakened. In this generation an equal unanimity prevails in the profession as to the non-contagious nature of the disease; and he who advances the opposite doctrine seriously, is deemed no more worthy of notice, much less a refutation, than would be an advocate at this time of the Ptolemaic system."‡

We have already stated that yellow fever, under certain inappreciable circumstances, may be introduced into a port in ships. Of this we will adduce several striking instances, all of which, with the exception of the first, will be new to the reader.

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* New York Medical and Phys. Journal, No. iii. p. 472.
† *Chervin.* De l'Opinion des Médecins Américains, p. 11.
‡ See American Journal of Medical Sciences, August, 1829, p. 523.

In a volume published by order of the Board of Health of this city,* we find the following statement made in a communication by Dr. Joseph Bailey, the then Health Officer. When we consider the source of this statement, and the additional circumstance that the vessel was a man-of-war, the facts detailed claim our fullest confidence.

The facts are numerous and indisputable, that the yellow fever has been communicated to individuals who have visited vessels, on board of which one or more persons have had that disease, or which vessels came from a place where it prevailed; and they have imbibed the infection, not only while the cargoes were on board, but after they were discharged, and the vessels thoroughly cleansed.

A noted instance of this fact occurred this year on board of the U. S. Brig Enterprize. After the sick had been removed to the hospital, the well were landed, that they might not be any longer exposed to the infected air of that vessel, and to afford an opportunity of purifying her, which was done by slacking lime in her limbers, and white-washing her throughout, not omitting her iron ballast, in which operation three casks of lime were used, and she was well ventilated by four windsails hoisted constantly in her hatchways.

The crew were so intemperate during the five days that they remained on shore, that we were under the necessity of sending them on board again. The brig had been purified in the interim, but it was soon evident that she was still an infected vessel; for in six days after the crew were sent on board, four men were taken sick with yellow fever, and in the course of five days, seven more had the same disease, making a fourth of all the men on board; and five of the eleven taken sick died. Those persons must have been infected after their return to the brig, and subsequently to her purification, otherwise the disease would have been excited in them, as it was in the case of some of their shipmates, from their irregular living and exposure to the weather, by lying on the ground at night.

Those men were more predisposed to receive infection, after their return to the brig, than they were previous to their landing, in consequence of having lived in a pure atmosphere, and being debilitated by repeated intemperance. This fatal evidence of the cause of the disease still lurking in the Enterprize, induced us to have the crew brought on shore again, and recommence her purification, which was done by using two more casks of lime, by letting into her hold daily several feet of water, and keeping up windsails. Six men were left to take charge of her, whose duty it was to pump out the water and turn the windsails, and they were directed not to sleep below in her hold.

Twenty-five days after her arrival, and after repeated white-washing, letting in water, and constant ventilation, one of the sailors obtained permission of a lieutenant, to take his wife on board: this woman was taken sick on the ninth of August, with yellow fever, after she had been seven days on board, and she died in the Marine Hospital on the eighteenth of that month.

In the case of this vessel, we have a positive proof, that this disease comes from abroad, and that its infection continues to act after an abundant use of lime, being ten times the quantity employed in white-washing a house of similar dimensions, besides the immense quantity of water let in and pumped out, and a constant supply of fresh air, conveyed into her hold by windsails. Here no animal or vegetable matters were to be seen, or otherwise detected, whose decomposition could keep up this poisonous air, especially after she was first cleansed.

In this same work, we find the following paragraph, to which we refer more particularly to show that it leads to unwarranted inferences:

* A History of the Proceedings of the Board of Health of the City of New York, in the summer and fall of 1822; together with an account of the rise and progress of the Yellow Fever, which appeared during that season, and the several documents in relation to it, which were laid before the Board.

Doctor De Witt, the Health Officer, contracted the disease [yellow fever,] while in the performance of his duty in examining infected vessels at the quarantine establishment, and died on the 11th of September [1819], *being the fifth person out of seven, who lost their lives while in the performance of the duties of this hazardous office.*

Now the period during which these five died is twenty-four years; and since 1819, another period of twenty-four years has transpired, during which not one has died. Besides, of the five that died, but three fell victims to yellow fever, viz., Dr. Richard Bailey in 1801, Dr. Ledyard in 1803, and Dr. De Witt in 1819.

We will now present the circumstances connected with the Pilot boat La Fayette, the Ship Gustave Edouard Negret, and the Brig Growler; and for these facts, we are indebted chiefly to Dr. James Harcourt, who was born at the Quarantine, was reared there, and studied medicine there, and who subsequently, now 36 years old, has spent all his years, with the exception of Dr. Doane's administration, in connection with this establishment. This case surely does not confirm the ratio of mortality given above relative to "this hazardous office."

The *Pilot-boat La Fayette* sailed for Havana, in 1839. She remained there ten days in June, and returned in ballast. While in the port of Havana and on the passage home, there was no sickness on board the La Fayette; but while performing her quarantine of thirty days at the port of New York, and while in the process of being cleansed and ventilated, there sickened on board of her with yellow fever, the three following persons:

Isaac Oxer was received into the Marine Hospital, June 29th, 1839, from the Pilot-boat La Fayette with the yellow fever. Died July 3d, with black vomit.

John Oxer, a brother of Isaac, was received from the same vessel, July 8th, laboring under the same disease. Discharged cured on the 13th.

Lockman, the pilot, from the same vessel, died, in New York city, about the same time, of yellow fever.

The ship *Gustave Edouard Negret* sailed from Havre with an assorted cargo, bound to Martinique. The cargo was unloaded in Martinique in June, and the vessel remained at St. Pierre eighteen days, having taken in stone ballast from the water. They heard of no fever in the port, and the crew were all well at the time of the vessel's departure; but the day after sailing, the cook was taken ill with fever, and died four days prior to the vessel's arrival at the quarantine of New York. She arrived here July 23d, 1843, when two men, who had sickened on the previous day, were sent to the hospital immediately. These were both well marked cases of yellow fever. When the ballast was being overhauled and the vessel cleansed, several others sickened; and of these, who were also sent to the hospital, one died with black vomit. These cases are thus presented on the records of the Marine Hospital:

Charles Terriin,	received July 23d,	—Discharged	Aug.	1st.
Guillaume Jean,	" "	"	"	20th.
Paul Perron,	" 31st,	Died	"	6th.
Balthasar Bulot,	" Aug. 2d,	Discharged	"	7th.
Louis Put,	" 19th,	"	Sept.	1st.

Bulot having a relapse on the 17th, remained in Hospital until the

first of September, the symptoms being scarcely less severe than in the first attack. Terriin, discharged on the first of August, relapsed on the 24th, the symptoms being more mild than in the first attack.

As regards the *Brig Growler*, the following statement was made by the Captain on her arrival at the Quarantine of New York:

The Brig Growler, Captain John Spear, sailed from Boston May 14th, 1843, bound to New Orleans. Arrived there June 12th, discharged cargo, &c. Immediately on the vessel's arrival, four men were paid off and discharged. The remainder of the crew enjoyed good health while at New Orleans; and they heard of no sickness among the shipping, nor in the city. The vessel took in a cargo consisting of wheat, pork, lard, oil, &c.; and she sailed July 10th for New York. On the day of sailing, she shipped four men in the stead of those discharged. All continued well until July 27th, when three of the seamen sickened with the usual symptoms of fever; and on the 30th July, not one of the men were fit for duty. One of the men that sickened first, died July 30th, and another died on the 31st July. The vessel went inside the breakwater, August 4th, she being leaky, and the pump choked. Having had a survey, she sailed on the 6th, for New York, and arrived at Quarantine, August 9th.

[Signed,] JOHN SPEAR.

The following cases of yellow fever were received from this vessel into the Marine Hospital, Staten Island:

John Brown,	-	received August 9th,	—	discharged August	15th.
John Hart,	-	" " 13th,	"	"	25th.
Robert Havinu (mate),		" " 13th,	"	Sept.	1st.
John Spear (captain),		" " 16th,	died	August	21st.

Two other men, who had been sick with the same disease on the passage, were convalescent when admitted into hospital. Besides, there was a case of a lighterman engaged in discharging the cargo, who went into the hold of the Growler unnecessarily; and although he did not remain longer than perhaps twenty minutes, he took sick. He was admitted into the hospital on the 28th of August, and on the 31st he died, a well marked case of yellow fever.

It is thus seen that there may be contained in vessels coming from tropical latitudes, a malaria, which may produce in persons who visit the vessel, or approach it within a certain distance, true yellow fever. As in the instance of the ship Ten Brothers before mentioned, the disease was here restricted to those that came within the sphere of this vitiated atmosphere; and when the ship and cargo are removed to a distance, the disease will, at the same time, disappear.

Now let the reader pause for a moment, and ask himself in what respect there is any analogy between the effects produced by these infected vessels and the Vanda. In unloading and loading the Vanda, twenty persons were engaged; and of these, one, and one too who did not enter the hold, took sick, but with a disease *not* yellow fever.

We will now present a detail of the cases that occurred in Rondout; and most of these were confined to the *strand*, that is, to individuals residing there, or to others who resided on the higher back ground, but were employed on the strand in the capacity of clerks or laborers. Indeed, the whole town may be said to be more or less connected with the strand, either in the way of residence or business; and this part of the village was in a filthy condition. We deem it unnecessary to

expand this part of our subject into very minute details, as the leading features of each case will indicate its true nature.

Case I.— *William C. Moore*, an American, æt. 26. He was taken on the 19th of August, the day on which the Vanda departed. His store is about 60 feet from where the Vanda lay, but we were informed that he was never on board the schooner. He had the premonitory symptoms of fever at the outset of the disease. There was no yellowness of the eye, but the skin was slightly tinged with that color, nor was there even bilious vomiting. On the fifth day, when the fever subsided, there was much prostration, and the pulse became preternaturally slow; but the patient recovered rapidly under the use of stimulants and tonics. This case was treated by Dr. Stringham, who had seen much more strongly marked cases before the arrival of the Vanda.

Case II.— *William V. Jessup*, æt. 22, an American, a clerk in the store of Mr. John S. Middagh, distant perhaps 200 feet from the point occupied by the Vanda. He was also taken sick on the 19th. This person, according to Drs. Elting and Stringham, had been in bad health for some weeks before the arrival of the Vanda. He had a foul tongue, and complained of the symptoms characteristic of the influenza then still prevailing, such as loss of appetite, pain in the bones, great prostration of strength, and especially a feeling of weariness in the limbs. We were informed by Col. J. T. Hendricks also that he complained of indisposition for three weeks before the arrival of the Vanda, being feverish at night and having a furred tongue; and on his advising him to apply to a physician, he replied that he was his own doctor and was taking various medicines.

This case seems to have commenced, if we date it from Saturday the 19th, when Dr. Elting first saw him, with symptoms of vital prostration. Indeed, Dr. E. supposed it to be typhus, and sent for Dr. Stringham in consultation. The patient had now a feeble pulse, heat of skin not great, vessels of the eye injected, tongue covered with a yellowish fur, with red edges and tip, and the teeth slightly covered with some dark sordes. On the following day, (20th,) according to Dr. E., he was considerably better, notwithstanding a more frequent pulse and greater heat of skin; but the pain in the head was, perhaps, less than on the previous day. The tongue along the centre had now more of a brownish aspect, while there were slight nausea and some vomiting of bilious matter. Gave calomel, to be followed by salts, which operated well on the third day, causing green evacuations. On this day, the symptoms appearing to be all meliorated, a solution of ipecacuanha, with the view to keep up action upon the skin, was prescribed. On the fourth day, as sudden prostration supervened, Dr. Stringham was again called in consultation. Stimulants, such as wine and brandy, were now prescribed, and with apparently good effect, for he slept some the ensuing night; and on the following morning, his symptoms were still more favorable. Even the slight delirium which had existed for several days previously, had disappeared; and Dr. E. embraced this opportunity of leaving his patient until 10 o'clock, P. M., in order to visit another at Rosendale. But in the night he again became delirious and very restless; and on the next day, 11 A. M., (Friday,) he died. The skin after death was of a lemon yellow color, and not of the mahogany cast peculiar to yellow fever. On Wednesday, prior to the adoption of the stimulating treatment, he vomited up a dark greenish fluid, with shreds

floating in it; but this Dr. E. regarded as of the same nature that he had seen in cases even two months prior to the arrival of the Vanda, and not as the coffee-ground matter peculiar to yellow fever.

Case III.—*Lavin*, an Irish laborer, æt. about 40, also took sick on the 19th. This was the only one of the twenty persons employed in unloading the Vanda that sickened; and he, as already stated, was not one of those that were engaged in the hold in filling the tubs with salt, nor did he work directly over the hatch in elevating these tubs; but he merely wheeled in barrows the salt from the deck into the store-house. Now, was this a case of yellow fever infection, when the other nineteen escaped? This case was treated by Dr. Wales, who regarded it as an ordinary bilious remittent fever. It was not till the third day of his sickness that a physician saw him. His symptoms were the same as those just described, but there was no yellowness of the skin, and but little of the tunica conjunctiva. On the night of the fourth day, nausea and vomiting ensued; and then it was that he threw up a dark bilious fluid, which also was announced to the world as a case of the true coffee-ground black vomit. This, however, is denied by Dr. Wales, as will be seen in the sequel. He died on the 26th, after seven days' sickness, having been, for some forty-eight hours, in the low and sinking state. He was of intemperate habits. The cabin in which he lived was one of the most wretched character.

Case IV.—*Boy at Rosendale*, æt. 7.—This case has been already described on page 306. Although this boy resided seven miles from Rondout, and had no known connection with the village, all the peculiar symptoms were strongly marked.

Case V.—*William Harris*, æt. 30, an Irishman, was taken sick on Sunday, the 20th, and died on the 24th. The symptoms of this case had some analogy to the others, but there was no yellowness of skin. We were informed by Dr. Wales that he died like a cholera patient—vomiting and purging, convulsions, cold surface, and leaden features. He had come down the canal several days before, being out of employ in consequence of having been crushed in a lock; and to this cause he himself ascribed his death. We were informed by Mr. Crane, the dock-master, that he had not the necessaries of life—that he lay on straw on the floor—and that bricks were placed under his head to keep it out of the wet and moisture.

Case VI.—*Marvin J. Merchant*, æt. 21, an American, also a clerk of Middagh's. He, too, was taken on the 20th. His case had no very marked symptoms; and it is sufficient to say that he recovered.

Case VII.—*Joseph F. Davis*, æt. 23, an American, a clerk in a store, distant about ten yards from where the Vanda had lain, was likewise attacked on the same day. This patient, as was the case generally, was treated with liberal doses of calomel, followed either by salts, castor oil, or senna. It was at this store that the pine-apples of the Vanda were deposited, and here all the customers were cheaply supplied. Davis himself, as he subsequently told us, eat an enormous quantity of this half-decayed fruit. He had at no time much prostration. This was the first patient that we saw on our arrival, he being then sufficiently convalescent to attend to his ordinary avocations. Even now, his eye and his skin presented a bright lemon color. This case also had been characterized by the slowness of pulse.

Case VIII.—*Calvin Davis*, æt. 16, an American, who took the place of his brother when he sickened on the 20th, was also attacked on the 24th. He was attended by Drs. Elting and Stringham. He was bled xvi. oz. on the first day of his sickness; and on the evening of the same day, he took 10 grains of calomel. He slept well, and appeared much better until the afternoon of the following day, when the pulse became more full and quick with considerable febrile action. We saw this patient too when he began to improve, and was under the use of stimulants and tonics. His eyes and skin were slightly tinged with yellow. He had eaten no pine-apples.

Case IX.—*John Colwell*, æt 60, an American, who keeps a victualling-house, at the distance perhaps of 100 yards from where the Vanda had lain, was also taken sick on the 24th. After several days' confinement, he was again enabled to attend to his ordinary avocation.

Case X.—*Mrs. Ira Leach.* This case was attended by Dr. Stringham, who says that she came to Rondout with the symptoms of the disease, having been attacked on a barge while it lay at New York or Brooklyn. On her arrival at Rondout, the symptoms were, says Dr. S.,

nausea and retching with an occasional discharge of a watery fluid, fever moderate, vessels of tunica conjunctiva injected, pulse below the natural standdard, both in frequency and force. Her bowels were now freely opened with calomel. On the next day, she was free from fever, pulse, forty-five per minute and easily compressible. Ordered brandy, under the use of which she gradually recovered. The eyes and skin now began to assume a yellow hue; and both were still yellow when seen by Dr. Vaché on the 28th of August, in a barge lying on the river.

Case XI.—*Richard Keator*, an American, æt. 25, was clerk in a store connected with the post-office, about ten yards from where the Vanda had lain On Friday the 25th, as we are informed by Col. J. T. Hendricks, he went down to New York with him on board a steamer; and on this passage, he complained of being very ill, with pain in his head and neck, having made the same remark to Col. H. several days before. He returned in the night-boat of Sunday, being obliged to keep his berth all the way; and as the point where Rondout passengers are landed is two miles from the village, he was still further exposed in travelling this distance. This case presented the ordinary symptoms of the disease. On Wednesday evening, Drs. Stringham and Elting wrote to Dr. Vaché as follows:

Richard Keator is still in a critical situation; the fever has nearly subsided; prostration is extreme; the discharges from the bowels are bilious, and of a dark green hue.

On Thursday evening, Dr. S. again writes to Dr. V.—

An unfavorable change has taken place in the case of Richard Keator since last evening; the prostration is extreme, with bloody discharges from the bowels, and vomiting of a dark shred-like substance which floats in the fluids thrown off with it; paucity of urine. We think he will not survive the night.

He died early on Friday morning.

Cases XII., XIII., XIV., XV.—On the same day, took sick, Isaac Krom, a taylor, and a girl at A. H. Anderson's; and on the 29th, Augusta McEntee, aged 11 years, was also attacked. All had the disease

slightly, and all recovered. Their residences were perhaps 300 yards from the position which had been occupied by the Vanda. A widow lady, æt. 45 was also attacked this day. "She lives," says Dr. S., in a letter to Dr. Vaché "from a quarter to half a mile from the dock, and she has not been in the lower part of the village for the last six weeks." She too recovered.

Case XVI.—*Robert Grove*, æt. 20. "He left Rondout on the 10th, four days before the arrival of the Vanda, says Dr. S. in a letter to Dr. V., "and returned on the 21st, two days after her departure. He was attacked last evening (29th.) He lives in the back part of the village, and he had not communicated with any one diseased." He became convalescent in a few days, but his skin and tunica conjunctiva were decidedly yellow.

Case XVII.—A child, æt. 6, who arrived here from the city of New York two days after the departure of the Vanda, was taken sick on Thursday, 31st. The little patient was attended by Dr. Stringham, who says that her symptoms were characteristic of the disease; but she became convalescent in a few days, when her mother took her back immediately to the city.

Case XVIII.—*George Canfield*, æt. 33, an American, a clerk in the store of J. D. Middagh, was attacked on the same day. He was taken with the usual premonitory symptoms of fever; tongue moist and lightly furred, slight nausea, and severe pain in head and slight in the back and at epigastrium. Treated by Drs. Elting and Stringham. He took this day (Thursday), calomel as a purgative, followed by Epsom salts and a Seidlitz powder. Evacuations dark green with whitish flocculi on the surface.

Friday. No change of symptoms—v. s. xx. oz.—spiritus Mindereri. Slight nausea still continues; stools black and generally of more consistency.

Saturday. More redness of the eyes; yellowness of skin, which is a new symptom in the case; constant change from better to worse and *vice versa;* great prostration. Ordered brandy, in the evening, one teaspoonful every hour. Stools thick and dark, which were compared to "grease from a cart-wheel."

Sunday. Towards evening, occasional delirium, pulse 80 and full, gastric irritability, and slight hæmorrhage from the nose, skin yellow, tongue moist and slightly furred in the back part, and very red at tip and edges. Brandy continued, being the only thing that the stomach could retain.

Monday. On the morning of this day, the patient was first seen by us. He was now much prostrated; tongue had the same appearance as on the previous day; there was occasional vomiting, consisting of a dark bilious fluid, mixed with the blood which he was constantly swallowing as it flowed down his posterior nares. But much of this blood he was incessantly spitting out; and as he was in a state of delirium, he threw it over himself, his bed, and against the wall. Pulse 100, and easily compressed; the hæmorrhage from the left nostril continued since the preceding day, which we, however arrested; skin had a lemon-yellow cast; the alvine discharges consisted of a dark fluid, with shreds suspended in it. There was at no time a preternatural slowness of the pulse. There was now no hope of his recovery; the delirium continued, accompanied with hiccough and picking of the

bed-clothes; the hands were also affected with tremors, and the muscles with subsultus; and at 4 o'clock P. M., he died. This was one of the most violent cases, the patient having died in four days.

This patient, as well as Jessup and Keator, is not supposed to have eaten any of the pine-apples. Canfield and Jessup, and also Merchant who recovered, all slept at Middagh's store, on the wharf, in a room on a ground-floor, close, damp, and destitute of all ventilation at night. The earth below this store-house is all made-ground to the depth of five feet since its erection, formed by the natural disintegration of the adjacent hills, mingled with the wash of the streets.

Upon the death of Canfield, we immediately resolved in connection with Dr. Jewett of Rosendale, (Drs. Stringham and Elting being now both confined to their houses by sickness,) to make a necroscopic examination, should it be allowed; and fortunately, just at this time, Dr. James R. Manley of New York, whose acquaintance with this disease extends over nearly the last half century, made his appearance.

The *post mortem* took place on Tuesday morning, seventeen hours after death. As all this time intervened before permission could be obtained to make the examination, and as the hour for interment had been designated, it was resolved to confine the necropsy to the abdomen. The body was not at all emaciated; it presented a fine development of the physical frame; and the external surface was of a lemon shade of yellowness.

The stomach contained a good deal of dark colored fluid, which was poured into a vessel; and as this patient was a reputed case of *black vomit*, it was examined attentively. It held in solution dark bile and perhaps blood swallowed on the preceding day; but it had not, in the least, the appearance of the coffee-ground black-vomit peculiar to yellow fever. The whole mucous membrane, with the exception of the pyloric portion, was in a state of high inflammation; and this tissue was partially disorganized, being readily rubbed off by the pressure of the nail. The liver, spleen, and intestines, were in their natural condition, while the gall-bladder was empty.

In view of the excited state of the public mind in the city of New-York and elsewhere, we immediately transmitted to the Resident Physician of this city, our opinion of the nature of the disease; and this certificate, as is seen below, was announced to the public under the official authority of his Honor, the Mayor. The result was such that all excitement ceased at once; and we shall ever remember with pleasure, that we contributed towards allaying a painful public excitement, and one too which might have led, as regards the commercial interests of this city, to the loss of millions of treasure.

MAYOR'S OFFICE, Sept. 6th, 1843.

The following certificate, transmitted to me by the Resident Physician, signed by James R. Manley, M. D., and Samuel Forry, M. D., of this city, and Edwin Jewett, M. D., of Rosendale, after personal examination on the spot of persons laboring under the disease, and of bodies of persons who died with it, affords *additional* satisfactory evidence of the nature of the fever prevailing at Rondout.

The great experience of Doctor Manley, his known ability in his profession and long connection with the Quarantine establishment of this city, gives to his opinion the perfect confidence of the city authorities.

ROBT. H. MORRIS, Mayor.

New-York, Sept. 6th, 1843.

To Robert H. Morris, Mayor and President of the Board of Health.

Sir—I received this morning, from Doct. Samuel Forry of New-York, now at Rondout, the accompanying communication. I leave it to your discretion to make it public. With very great respect, your obedient servant,

Alex. F. Vache, M. D., Resident Physician.

Rondout, Sept. 5th, 1843.

Dear Sir—I have the honor to transmit you the accompanying certificate. We have had a post mortem examination of the individual reported as having died yesterday. The disease is now a very plain one. Our opinions derived from the symptoms have been fully confirmed by the facts revealed by dissection. We regard the disease as quite amenable to remedies. The patient, I may add, was one of the most strongly marked, having died in five days after the first attack. Yours in haste,

Samuel Forry.

Alex. F. Vache, Resident Physician.

Rondout, Sept. 5, 1843.

We, the undersigned, from a full investigation of the character of the febrile disease now existing at Rondout—an investigation based upon the features of the disease in the living and the appearance of the internal organs after death—have arrived at the following conclusions:

1. The disease is a *Bilious Remittent Fever* with a great tendency to assume the typhoid type.

2. So far as our personal knowledge extends, and so far as we can learn from others, we are decidedly of opinion that there has not been a single case of *yellow fever* in this locality, nor has there been a single case accompanied with the *black vomit* peculiar to that disease.

3. As regards the question of the contagious nature of this disease, our opinion in the negative is equally decided.

James R. Manley, M. D., of New-York City.
Samuel Forry, M. D., " "
Edwin Jewett, M. D., Rosendale.

On the following day, it was signed by the three physicians of Rondout:

We, the undersigned, concur fully in the views expressed above.

John Wales, Surgeon, Rondout.
H. S. Stringham, M. D. "
Richard Elting, M. D. "

Case XIX.—*Abel Eaton*, æt. 18, an American, a clerk in Bevier's store, with Keator, was taken sick on the same day with Canfield. In this case, the fever ran its course in thirty hours, when the prostration that followed was very great; the stools were dark and offensive, but there was little or no vomiting. The treatment consisted of the free administration of calomel in the febrile and early stage; and subsequently, when depression supervened, of stimulants and tonics. This patient recovered. He had eaten freely of the pine-apples. He was treated at first by Dr. Stringham, and subsequently by ourselves.

Case XX.—*George Love*, æt. 35, an Irishman, employed as an hostler to a livery stable, was attacked on the first of September. We have no notes of the first three days; but we saw him on the fourth, when there seemed nothing unfavorable in his case. He was treated by Dr. Wales. On the fifth day, about two o'clock, P. M., he was suddenly prostrated. The countenance was expressive of great languor and

oppression; delirium succeeded by manifest stupor and deafness; the tongue was brown, dry, and chapped, and the lips were also dry, chapped, and covered with the dry scabs of an eruption; the teeth and gums were encrusted with a dark, dry, and tenacious sordes; and the chest was marked with vibices. He continued in this state, with the signs of enfeebled innervation gradually becoming more marked; and on the sixth day, he became entirely listless with stertorous breathing, so that he could be no longer induced to show his tongue, which, on the previous day, had been protruded with great difficulty, being tremulous and not easily returned. Died in the afternoon. His residence was perhaps two hundred and fifty yards from where the Vanda had lain.

Case XXI.—*Watson Prentis*, æt. 33, an American, worked at boot-making in a shop on the strand. He also was attacked on the first of September. This man was under the treatment of a *Thompsonian* physician, but we had the privilege of seeing him at any time. The following description of his symptoms, we gave to Dr. Vaché on the sixth day of his sickness:

Skin hot, dry, and yellowish—pulse one hundred and full—conjunctiva yellow, with the vessels much injected—inflammation of the throat and swelling of the tonsils, the mucous membrane of that region being of a deep and dark red, presenting the appearance of the early stage of malignant sore-throat—tongue covered with a dry dark coat along the centre, with very red tip and sides—much epigastric tenderness and gastric irritation. Is this yellow fever? The case will doubtless prove fatal.

On the following day, we wrote to Dr. V. as follows:

As I anticipated in my letter of yesterday, the case under the care of the Thompsonian has proved fatal. Last evening, he offered to turn over the patient to me; but, upon a strict examination of the case, I concluded to let him finish his own work. The patient did not reach the stage of prostration or collapse usually observed; but he lay comatose and insensible, with a full pulse and stertorous respiration, from which nothing, except the pain caused by making pressure on the epigastrium, would arouse him. On making this pressure, he once exclaimed, as he turned his body—"Oh don't." He lived till near day-light.

Having observed this case for some days, I urged all along upon the Thompsonian, the indispensable necessity of mercurial purgatives, the application of leeches to the pit of the stomach, and the use of blisters; but, as he continued his treatment with lobelia, "nerve-powder," "composition," etc., I looked upon the case as necessarily fatal.

There are now no cases of sickness here that have in any marked degree, the features characteristic of the prevailing malady; but the diseases of every other kind, as is observed in all epidemics, manifest the peculiar character of the prevailing disorder.

It is quite possible that the peculiarity of this case may be due to the stimulating treatment used by the Thompsonians.

In this same letter, we make reference to the various reports of cases of death from yellow fever, in the surrounding country, in individuals who, it was alleged, had been on board the Vanda and had also perhaps eaten of the pine-apples. This was part of the scheme of the alarmists, to magnify the hugeness of their bug-bear. We wrote thus to Dr. Vaché.

Among the several communications now before me is one from Dr. Cantine of Ellenville, showing that the reported case of death from yellow fever in a

boy who had been on board the Vanda, has no foundation in truth. His death was caused by eating some poisonous wild vegetable. Besides, the boy had never seen the Vanda, nor any of her pine-apples.

About this time, (September 10th,) there seemed to be a subsidence of the epidemic, as there had been scarcely a new case for the period of a week. On the 3d, Dr. Stringham had been attacked, and on the 4th, Dr. Elting; but this was merely a temporary suspension, for now there occurred a series of new cases.

In our further description of this disease at Rondout, we deem it unnecessary, with the exception of the cases of Drs. Stringham and Elting, to refer to any but the fatal cases.

Case XXII.—H. S. Stringham, M. D., was attacked on September 2d, that is, he was first confined to his room on this day, having complained of the premonitory symptoms on the two days preceding. On this case, we have taken copious notes, but we think it unnecessary to present more than the leading features. On the second and third days, he was well purged with calomel followed by senna, salts, etc., the evacuations being very dark and bilious; and on the fourth, he was doing well, the symptoms promising a speedy recovery. In the evening, however, a sudden prostration occurred, both physically and mentally, so that in the course of half an hour, he changed from hope to despair. Stimulants were cautiously given, as there was manifest epigastric tenderness, indicating the use of leeches; but as these could not be immediately obtained, a blister was applied over that region; and the next morning he seemed quite relieved both from his physical and mental depression. We were now treating the patient in connection with Dr. Jewett of Rosendale.

Early this morning, September 5th, leeches were applied to the epigastrium over the blistered surface, and these bites continued bleeding through the day. His improvement now seemed remarkable; but about 5 o'clock, P. M., prostration again occurred, but not so severe as on the preceding evening. This state of physical and mental depression came on regularly every day for a week or ten days; and when, in the earlier part of his sickness, he was in these states, the pulse showed little or no change from the natural standard, while the skin was often dry and very hot. Generally speaking, the skin was soft, the tongue covered with a yellowish fur and moist, in which it was unlike the other cases which usually presented, as the disease advanced, a tongue with red edges and tip, and a dry black streak along the centre. The case was at no time marked by gastric irritability. This condition, we observed, was least apt to follow, when the depleting plan of treatment was pursued.

On Tuesday, the 5th, Dr. Manley of New York saw him in consultation with Dr. Jewett and ourselves.

On Wednesday morning, quinine was prescribed; but in the evening, the usual sinking fit recurred, when blisters were applied to the nape of the neck and the calf of each leg.

On Thursday morning, he was free from all unpleasant symptoms. Skin and pulse were natural, tongue moist and coated, the edges pale. Continued quinine and more nourishing diet, as well as brandy occasionally. On Friday and several succeeding days, he continued in the same favorable condition, with the exception of the sinking state which usually took place toward evening.

On Saturday Dr. Manley returned to Rondout. It was now concluded to continue the mercurial treatment with a view to its constitutional effect, and to pursue a tonic and occasionally a stimulating treatment, with nourishing diet.

About a week after the application of the leeches, two of the bites began to bleed freely, which resisted all the ordinary modes of arresting it for several days. Even the actual cautery arrested the hæmorrhage but temporarily, but it was finally completely stopped by the pressure of a tourniquet. This indicated a low condition of the vital powers; but the patient when in health has weak physical stamina, he being a confirmed dyspeptic. Up to the tenth day of sickness, the skin exhibited no appearance of yellowness; but now it, as well as the conjunctiva, became very much so, and continued the same up to the twentieth day of his confinement, when we left Rondout. Dr. S. was now merely able to sit up a few hours during the day. As we were leaving, we happened to refer to the time spent with him, when he expressed great surprise, supposing that we had been there but several days. He had, in truth, spent nine-tenths of the time in a drowsy and comatose state.

Case XXIII.—*Richard Elting*, M. D. This case was but slightly marked, and he was confined to his house not more than two or three days. He was attacked on the 4th September, after having undergone a great deal of fatigue professionally.

Case XXIV.—*Joseph Hunter*, æt. 30, a Scotchman, employed as a hand on board the steamboat Norwich, was taken sick on the 5th September. He had been engaged for several days in putting a coat of white paint upon the outside of the Norwich, and this too when the thermometer in the shade was 90° of Fah.; and, at the same time, he was working in the sun, where the heat was still more augmented by reflection. Besides, he performed, on the day that he took sick, the feat of eating twenty-four fine large peaches. Dr. Manley saw him first, and prescribed for him a mercurial cathartic; but as he left for New York on the same evening, the patient was subsequently attended by Dr. Jewett and ourselves. On Wednesday and Thursday, he was still further purged with calomel, the evacuations being dark and bilious; and in the mean time, as there was considerable febrile excitement, blood was taken from the arm, and leeches were also applied to relieve the epigastric tenderness. About this time, some of the symptoms peculiar to the prevailing affection made their appearance, such as yellowness of the conjunctiva with injection of the vessels of that tissue; but the tongue was always moist and slightly covered with a yellowish fur. On Saturday, Dr. Manley, who made a second visit to Rondout, considered the patient to be doing well.

As regards ourselves we felt a more than ordinary interest in this patient, from the circumstance that he had been a soldier in the United States army, during which time he had been twice our patient, viz., once in Florida and again in the Cherokee nation in Tennessee; and he, on his part, had in us the most unlimited confidence, saying that his case was but a "small affair" compared with a Florida fever.

The patient all along evinced no symptoms of sinking; and he seemed, especially after the application of the leeches, to be quite free from local lesions. Tonics, especially quinine, were now employed.

On Monday, at 12, M. Drs. Elting, Jewett, and ourselves, saw the

patient in consultation, and we concurred in the opinion that he was now out of danger, his case being one of mere debility; but, at 3 o'clock of the same day, as the patient rose to go to stool, he suddenly felt faint and the extremities became cold; and in one hour after, he was a corpse!

Drs. Jewett and Elting, as they happened to be in the patient's immediate vicinity, were soon at his side; but all their efforts, consisting of the administration of half a pint of brandy and the application of Cayenne pepper externally, aided by the frictions of three individuals, proved unavailing. This was very like the collapse of cholera. Instead of *black vomit*, there were discharges both by the mouth and rectum, that closely resembled the *rice-water* of epidemic cholera. There was some spasmodic action in the extremities; and the patient maintained his senses to the last, exclaiming—"*Oh! if I could only get warm.*"

There was little gastric irritability throughout the progress of the disease; but after death, the surface of the body presented a decided yellowness of the lemon tinge.

The result of this case took us all aback. Believing that the depleting plan, in connection with mercurials, in the cases that had proved fatal, had not been sufficiently carried out before resorting to stimulants, and having seen in a number of cases treated in connection with Dr. Jewett, the value of this mode in the early stage, we now felt a consciousness that this disease defied all the powers of human skill and science, illustrating "*the destruction that wasteth at noon-day.*"

Case XXV.—*Thomas Clark*, æt. 30, an Irish laborer, took sick on the 6th September, and died on the 11th. He was under the treatment of Dr. Wales, and we saw him every day. He had all the peculiar features of the disease, such as yellowness of the skin and conjunctiva, with injection of the vessels of the latter tunic, tongue scarlet at the tip and along the edges with a dark streak along the centre, and epigastric tenderness, with gastric irritability; and when in the sinking state, there occurred the additional symptoms of great languor and oppression, delirium followed by stupor, and an encrustation of the teeth and gums with sordes. In this state he died, having several times vomited a dark green-colored fluid. This man worked in the coal-yard of the Delaware and Hudson Company, but lived about half a mile from where the Vanda had lain.

Case XXVI.—*Patrick Kaley*, æt. 30, an Irish laborer in the coal-yard of the Delaware and Hudson Company, but living about a mile up the Rondout, near Wilbur, took sick on the 8th and died on the 15th of September. This patient was attended by several medical men by turns; but we saw him only on the evening before he died, when we deemed it scarcely necessary to make an effort to save life. He died on the following morning. After death, his skin was very yellow. The symptoms, on the previous evening, were as follows: extreme gastric tenderness, with occasional vomiting of a dark bilious matter, tongue very dark along the centre with very red edges and tip, some sordes about the teeth and gums, delirium and stupor, yellowness of the skin and eye, with injection of the vessels of the conjunctiva.

Case XXVII.—*Barney Brian*, æt. 35, an Irish laborer working in the same yard, and living on the elevated part of the village, about half a mile from where the Vanda had lain, was attacked on the 9th, and died on the 14th of September. We saw him several times, and his whole case bore a strong resemblance to the one just described. He, too, was treated by Dr. Wales.

By this time nearly all excitement at Rondout had subsided, the occurrence of the last three deaths having had little or no influence upon the public mind. These men, it is well understood, seldom seek medical relief in time; and when they do have it, they are badly nursed, and even the direction for the administration of the medicines prescribed, is seldom obeyed.

Case XXVIII.—*Emeline Freeman*, æt. 25, of mixed origin, (her grandfather being an Indian and her grandmother a negress, her father a half blood Indian, and her mother a white,) who was employed as a domestic at the Hon. Mr. Hasbrouck's, took sick on Friday the 8th of September, and died on the 15th. Her fever, from the beginning up to Wednesday morning, was a *simple continued fever*, with a pulse of one hundred and a dry skin, and the tongue was moist and covered with a white fur; but on the morning of Wednesday, there was a slight remission; and on the following morning, the remission was so distinct that we pronounced her apparently better. On the following night, however, sinking of the powers of life suddenly supervened; and by 9 o'clock next morning, she was a corpse. This case during life had not one of the peculiar symptoms of the prevailing fever. Epigastric tenderness, yellowness of the skin and conjunctiva, with injection of the vessels of the latter, preternatural slowness of the pulse, and the tongue dry and dark along the centre with red edges and tip, were all wanting! She was treated chiefly by mercurials as a purgative and alterative, by mild diaphoretics, sinapisms to the epigastrium, etc. After death, however, both the skin and eyes were yellow; but of the extent of change from the naturally yellow tint of these parts, we could not determine.

It may be here added that among the small number of colored persons in Rondout, the majority was attacked with the prevailing disease, or at least with what is known by the name of a "bilious attack"—a fact which becomes of some importance, when taken in connection with the circumstance that this variety of the human race is usually considered as possessing an exemption from yellow fever.

We deem this detail of thirty-two cases, including the four cases on the Vanda previously described, as quite sufficient in the way of illustrating the peculiar nature of the disease. We have had the notes of another case, which have become mislaid, being that of Mr. Beaver, residing, perhaps, eight miles below Rondout. His symptoms were characteristic of the prevailing fever, the skin and eyes being of an intense yellow. After three or four days, the fever terminated in a tertian ague. He had no connection, we think, with Rondout.

As regards the total number of cases that occurred here, it is difficult to arrive at a precise result. Of those having the yellowness of the skin and eye, which were the most general symptoms, we may safely say that, during the thirty days commencing with the 19th of August, when the Vanda left, there were at least forty cases. The following table gives the deaths at Rondout in the order of their occurrence:

Names.	Ages.	Employment.	When taken sick.	When died.	Period of sickness.
1. Hiram V. Jessup	29	Clerk at J D. Middagh's	August 19	August 25	6 days
2. —— Lavin	40	Irish laborer	" 19	" 26	7 "
3. —— Harris	30	Do.	" 20	" 24	4 "
4. Richard Keator	25	Clerk in store at Post-Office	" 27	Sept'ber 1	5 "
5. George Canfield	33	Clerk at J. D. Middagh's	" 31	" 4	4 "
6. George Love	35	Hostler	Sept'ber 1	" 7	6 "
7. Watson Prentis	33	Bootmaker	" 1	" 8	7 "
8. Joseph Hunter	30	Hand on board Norwich	" 5	" 11	6 "
9. Thomas Clark	30	Irish laborer	" 6	" 11	5 "
10. Patrick Kaley	30	Do.	" 8	" 14	6 "
11. Barney Brian	35	Do.	" 9	" 14	5 "
12. Emeline Freeman	25	Domestic at Mr. Hasbrouck's	" 8	" 15	7 "
Average period of sickness - - - - - - -					5¾ "

Of these fatal cases, we have a personal knowledge of all, with the exception of the first four. The ratio of deaths to the number of cases may be estimated at 1 to 3½, and the average period of sickness at something less than six days. We find this mortality to be considerably less than in the yellow fever epidemics of the City of New York; but the number at Rondout is too small to be a fair comparison. In New York, in 1803, 600 cases and 262 deaths were reported to the Board of Health; in 1819, there were 63 cases and 43 deaths; and in 1822, the cases numbered 411, and the deaths 240.

We will here bring under notice two other fatal cases, which occurred in individuals who had been exposed to the locality of Rondout.

Case I.—*Samuel Jessup*, æt. 33, a brother of Hiram V. Jessup, residing at Piermont, on the Hudson, twenty-two miles from New York, went to Rondout, on learning the illness of his brother. Contrary to the newspaper statement that he nursed his brother, he reached there after his death, and after the departure of the Vanda. He returned to Piermont, and took sick on the 28th or 29th of September, his brother's funeral having taken place on the 26th. Dr. Richard K. Hoffman, of New York, having been called in consultation, Dr. Vaché addressed him a note, requesting him to state his opinion of the nature of the disease. To this the following reply was made:

Dear Doctor—In reply to your note of this date, I have no hesitation in stating the disease of Mr. Jessup, at Piermont, to be, in my opinion, bilious remittent, and not the yellow fever. I remain yours, truly,

Rich'd K. Hoffman.

Dr. Alex'r F. Vache.

This Jessup died on the 4th September, after six or seven days' sickness, not more than two days having intervened between the time of his exposure at Rondout and of his attack at Piermont. What rendered him peculiarly susceptible, was the fact that he labored under two of the strongest predisposing causes to the action of epidemic agents, viz., fear and depression of spirits. It cannot, however, but be regarded as an extraordinary circumstance, that about this time two men died at Yonkers, which is two miles nearer to New York than Piermont, but on the opposite side of the river. One of these, who died on the 25th of September, had an extremely yellow skin, and a vomiting of what the attending physician designates as "dark coffee-ground matter;" but he shows, as will be seen in the sequel of this paper, that the disease was *indigenous;* and of similar cases, we will give examples which have occurred in New York City, in Brooklyn, and on Staten

Island—all going to prove that the fever at Rondout was but the manifestation of a widely extended cause.

Case II.—*William Mather*, an engineer to the steamboat Victory. The following history of the case we received from Dr. Vaché, while we were yet at Rondout:

Mather was taken sick in Rondout last Friday. He came to the city in the Victory on Saturday, having taken when on board calomel and castor oil; and on his arrival here, he went to his father's residence in Broome-street. Complaining of headache, his mother gave him castor oil on Sunday, and sent for Dr. Hunter the elder, who prescribed an emetic. He almost immediately commenced vomiting—strained violently—and continued to do so until the next day, (Monday,) when Dr. H. reported him to me as a case of Rondout fever. I found him greatly prostrated, that is, complaining of excessive debility—pulse 60—eye clear—tongue tolerably clean and moist—skin rather cooler than my own—hiccup—vomiting and purging at intervals, and had been doing so since he took the emetic, and straining violently and with considerable effort. The fluid voided seemed to be his drinks, and a small quantity of a dark grumous shred-like substance, resembling bleached or discolored blood, and easily retained in the hand when fished from the vessel. Stools dark. Directed with Dr. Hunter a blister to the epigastrium, and lime-water and milk as a drink. At noon, saw him again with Dr. Manley—vomiting less frequent, but other symptoms the same—directed sulph. quinine grs. viii., and soda powders freely as a drink. Evening—pulse about 80—continued same treatment. Tuesday morning—pulse 60—had slept all night—no vomiting. While waiting for Doctor Hunter, he vomited once a dirty, slimy substance, perhaps a gill—hiccup—tongue more dry and dark. Directed spirits of camphor in small doses for the hiccup, which immediately allayed it—continued the treatment. Noon—tongue more dry and thickened—occasional hiccup—coma increased. Directed yest and charcoal, and porter—no vomiting during the day. Wednesday morning—pulse the same—tongue retracted and thickened, very dark—sordes about the teeth—stupor very great—directed milk punch in such quantities as he could be induced to take. Noon—all the symptoms aggravated—refuses to receive any thing—breathing very short. Evening—dead! Certificate, died of TYPHUS.

We have thus laid before our readers the symptoms by which the malignant fever at Rondout has been characterized, leaving each one to draw his own conclusion as to its nature. At the same time, it is incumbent on us to add, that, as regards the black vomit peculiar to yellow fever alleged to have occurred in a number of cases at Rondout, *the assertion does not rest upon the personal observation of a single physician.* The three physicians at Rondout, it has been already seen, put their names to the certificate signed by Drs. Manley, Forry, and Jewett. Nor is the yellowness of the skin by any means pathognomonic of yellow fever; for this yellow suffusion of the surface is frequently seen in the severe remittents of every part of the United States; and likewise in Bengal, where yellow fever, according to Twining, can scarcely be considered an endemic, the more severe remittent fevers are every year characterized by an intense yellow hue of the skin. In this form of disease, according to Twining, the patient often sinks gradually into a state bearing some resemblance to syncope, and to the collapse that supervenes upon the low form of cholera; and in other cases, after two or three slight paroxysms, when no danger is apprehended, prostration suddenly takes place without any obvious cause, and within an hour death follows. Now, these phenomena correspond exactly with some of those witnessed at Rondout, but the greater number were characterized by the supervention of typhoid symptoms.

A striking illustration of the sudden retreat of the blood to the central organs, is afforded in Case XXIV. (Joseph Hunter); the patient, when no danger was apprehended, having died in two hours, with the symptoms of the collapse of cholera. These different forms of the malignant grade of remittent fever are well described by Professor Eberle. Death, he says, not uncommonly happens in the third paroxysm; and if the disease persists beyond this period, great prostration suddenly supervenes, the skin is either clammy cold or pungently hot, delirium coexists, and not unfrequently vibices, petechiæ, and hæmorrhages,—in a word, all the signs which characterise typhus fever. This description answers to the majority of fatal cases at Rondout.

By Dr. Cartwright of Mississippi, well-known for his valuable writings on fevers, in describing an epidemic remittent fever, which prevailed in Monroe county, Mississippi, in the autumn of 1822, phenomena analogous to those presented in the cases at Rondout, are shown to have existed. The skin, for instance, began to acquire a *yellow color* during the third paroxysm. In Florida, we have ourselves seen cases of remittent fever, having this yellow suffusion strongly marked.

Throughout the United States, the more malignant forms of remittent fever, especially when occurring during unhealthy seasons, as for instance, in the present one, characterized by the recent general prevalence of *bilious* influenza, these same *congestive* complications have been not unfrequently observed. This is not the first time, by any means, that the State of New York has experienced an indigenous visitation, like that of the fever at Rondout; and at no period of time, keeping in view the history of epidemic influenza in that locality, could it have been, with better reason, expected. But this point has been already fully illustrated.

It is remarked by Noah Webster, LL.D., in his "History of Epidemics," and, long before his time, by Sydenham and Sennurtus, that influenza is the disease most clearly connected with malignant fever and angina, epidemic dysentery, plague, etc., which it usually precedes. The same view of the question is maintained in the "Cyclopædia of Practical Medicine." Thus—

> It is a rare thing that any one form of epidemic disease rages alone, that is, without being preceded or followed by another. Different forms of epidemic diseases usually succeed each other in a series, either in the same year or in different years: and this is called an epidemic constitution. Sydenham was, of all English physicians, the chief observer of these phenomena, and was preeminently entitled to the appellation of the English Hippocrates.

Lord Bacon, whose mental constitution was of a character not to allow his own fancies to supply his natural facts, framed the aphorism, which experience has since repeatedly confirmed, that "the lesser infections of small-pox, purple fever, agues, &c., in the preceding summer, and hovering all winter, do portend a great pestilence the summer following."

Upon this point, Dr. Webster remarks—

> That yellow fever never occurs in the temperate latitudes of America, except under a pestilential constitution of the air, manifested by other malignant diseases; and that it has been preceded by acute diseases, and followed by remittents, dysentery, and malignant pleurisy.

Indeed, the history of every pestilence shows that it never comes alone, but that it is the crisis of a series of minor and unusual diseases, as was observed at Rondout. Thus as the forerunner of yellow fever, we have usually a malignant remittent, which, as the epidemic declines, often appears again. Here then is presented the difficulty, which has been the subject of dissension among the faculty for years, of distinguishing between this malignant fever and the *bona fide* pestilence. This is well illustrated by Dr. Halloran:

> The occurrences which preceded the epidemic of Barcelona in 1821, correspond with the old and recent observations on a similar subject in other countries; it almost invariably happening that the yellow fever of Spain is preceded by unusual diseases of various form and force, more particularly by bilious remittent fevers, which are often so aggravated and malignant that physicians themselves do not venture to define the line of demarcation between them and the avowed epidemic.

We adduce these facts, especially to show that the malignant fever at Rondout was but the crisis of the violent and unusual diseases prevailing there for some two months, instead of being the result of an infection introduced by the Vanda. Upon this point, we cannot forbear introducing the following remarks from the "Cyclopædia of Practical Medicine:"

> Physicians, therefore, have perplexed themselves with the most unaccountable dilemma that ever found its way into any science. They have acknowledged a disease called malignant fever, which has ushered in an epidemic pestilence, *to be their own*, or at least the product of the country where it appeared; but as soon as a little change in its character has taken place, (which amounts to nothing more than a change in degree, not nearly so great as that which takes place in the pestilence itself, in the short course of its career,) which change in a few months is put off again, *then* it is to be accounted of foreign origin, and ships and goods are condemned as the supposed channels of introduction.

This applies both to the plague and yellow fever; and looking back to the epidemics of 1822, 1819, 1805, and so on, New York may take perhaps to herself the remark of Dr. Rush, that "Philadelphia must admit the unwelcome truth sooner or later, that the yellow fever is engendered in her own bowels." It is certainly most philosophical to ascribe the production of epidemic pestilence to the country in which it rages.

Moreover, it is further shown by Dr. Webster's erudite researches, comprising the space from the days of the Bible up to his own times, that the periods of extensive pestilence and mortality in man's history, have been remarkable for extraordinary phenomena in nature, such as volcanic action, meteors, tempests, inundations andextreme irregularity of the seasons. Although we may not subscribe unqualifiedly to these deductions, yet it is a fact too well known to be questioned, that unusual weather and intemperate seasons are often either the antecedent indications or the concomitants of a pestilential epidemic. This irregularity and intemperature of the seasons, that is, extremes of the weather, have been so frequently observed, not only in modern times, commencing with the histories of the plagues of London in 1625 and 1666, up to our own day; but, in referring to the pages of Thucydides

and Livy, in their descriptions of the plagues of Athens and Rome, we find the same natural signs recorded, either as antecedent indications or concomitant phenomena.

Now, let us survey the meteorological phenomena of the current year, at home: January was extraordinarily mild; February and March ran into the opposite extreme; April was more than ordinarily wet and cold, thus protracting the winter into May. Even as late as the last of this month or perhaps the first of June, when the fields had scarcely gotten rid of the late snows, there occurred another snow-storm, sweeping across our northern borders, much to the injury of vegetation. Meantime, appeared a most marvellous celestial phenomenon, which, though it ultimately proved to be a comet, yet came in such a "questionable shape," that it was long designated "the strange light." As summer advanced, the heat became most intense, often rising to 100° Fahrenheit in the shade, and this was not unfrequently protracted for days. In June appeared an epidemic influenza, simultaneously along our northern parallels, which has since, in its universal sway, gradually swept south over the whole of North America, and which is now prevailing in the southern hemisphere. In our own region, if not elsewhere, this epidemic has been characterized, in many districts, by a strongly marked bilious type; and at Rondout and its vicinity especially, during the months of June, July, and August, it produced in individuals the symptoms of yellowness of skin and eye, the vomiting of a dark, flaky, bilious matter, a preternatural slowness of the pulse, epigastric tenderness, and great prostration of the vital powers. Finally, when the disease had reached its acmé of malignancy, a number of cases, already detailed, proved speedily fatal.

In the sequel, evidence will be presented showing satisfactorily that the malignant fever at Rondout, the result, doubtless, of the meteorological and morbid phenomena above detailed, was not confined to that locality; but that, epidemic and indigenous in its nature, it has appeared in various other places. This conclusion is based upon the private correspondence of the Mayor and Resident Physician, which now first sees the light of day. The writers of these letters surely deserve, nor will they fail to receive, the thanks of the community, in view of having addressed their communications, unlike the Kingston correspondent, to the Board of Health.

We may here add, that in the malarial regions of the West and South, remittents, and also intermittents, are essentially congestive in their nature; and when this extreme congestion of blood in the great central organs occurs, constituting the "*congestive fever*," the disease becomes alarmingly fatal. Under these circumstances, in our South-western States and in Texas, it is known by such expressive epithets as "*the cold plague*" and "*the battle-axe of death*."

"Venous congestion," says Professor Paine, "whether in its local forms, or connected with idiopathic fever, appears to be greatly owing to miasmatic poison; and in these instances, it manifests its worst modifications. It, therefore, prevails most in particular latitudes, and in certain places. In America, north of the latitude of New Haven, (Connecticut,) it is comparatively unknown, except when occurring in connection with typhus fever; the true typhus being also limited, on this continent, to the regions north of that line." *

* Medical and Physical Commentaries, Vol. II. p. 219.

It would be no very difficult task to show that there annually appears in some locality, even within the State of New York, a violent endemic analogous, in many respects, to that of Rondout. We are informed, for instance, by Dr. Edmund G. Rawson, now a member of the Board of Aldermen of this city, that at Broadalbin, Fulton county, New York, about forty miles north-west of Albany, there prevailed in the summer of 1831, under his personal observation, a bilious remittent fever, with a strong tendency to the typhoid type, and characterized, in the majority of cases, by a *yellow suffusion of the skin and a muddy eye.* The disease was limited to the village and the surrounding country within two or three miles; and the fatal cases occurred mostly in the village and the immediate vicinity, there being nine or ten deaths among, perhaps, fifty cases. In this locality, no intermittent fever ever originates, nor is it subject to remittent fevers. The population of Broadalbin was then only about 250, which is, perhaps, one-seventh of that of Rondout.

A similar disease prevailed, last year, in the healthy village of Delhi, on the Delaware river, in this State. For an account of it, we are indebted to Dr. Ebenezer Steele, who styles it a "fever of the remittent form, with a strong tendency to assume the typhoid type."

"The number of cases," he says, "which occurred within the bounds of the village, which has a population of 1000, were from 160 to 170; and of these, probably two-thirds were, after a few days' confinement, relieved by timely remedies. The number of deaths were eleven. The same fever prevailed in other parts of the town to some extent; and in the summer and autumn of 1841, it was rife in the towns of Kortureght and Harper's Field, and in Noxbury it continued even into the winter; proving fatal, taking the total of all these places, to a great many."

Since the receipt of this communication from Dr. S., we have had a personal interview with another physician of the same place, Dr. Ferris Jacobs. He says that some of the cases *proved fatal in six or eight days, and that after death there was decided yellowness of the skin and tunica conjunctiva.*

Now, in the particular modification of fever that occurred at Rondout, the effects of the venous congestion were manifested by a sinking, bearing a considerable resemblance to the collapse of epidemic cholera, the coldness persisting until death; or else it was evinced, as more generally happened, by all the symptoms that characterize typhus fever.

It may not be amiss here to add, that on our return from Rondout, after having investigated the disease for the period of nineteen days, we were asked by his Honor the Mayor, as President of the Board of Health, whether our subsequent researches confirmed the opinion given on the second day after our arrival at Rondout, as expressed in the certificate given on a preceding page. To this we replied in the affirmative, averring that every day of the nineteen spent there gave additional confirmation to the opinion, that the disease was a *malignant remittent fever, with a great tendency to assume the typhoid type;* but that, inasmuch as it is easier to make a distinction of disease in theory than to realize it, in some instances, in practice, we would not quarrel with any one who should designate it an *indigenous and a non-contagious yellow fever.*

As there is but little in the medical topography of Rondout that will serve to explain the occurrence of this violent disorder; but as, on the contrary, it has always had a general salubrity in keeping with its physical features, it may be well to inquire whether the most healthy localities, as for instance in the granite region of New England, have not suffered, at irregular periods, endemics and epidemics equally violent. We here find in a population of 1600 or 1800, in the course of one month, a mortality of twelve individuals; and with this, let us compare the facts relative to the diseases and epidemics that have prevailed since 1735, at Deerfield, Massachusetts. We select this place, because we find an excellent paper on the subject by the venerable Dr. Stephen Williams, among the "Communications of the Massachusetts' Medical Society."

In 1735, there prevailed here an epidemic scarlet fever, which ravaged the whole of New England, and which was so fatal as to be called the "plague among children." It was again prevalent here in 1742. In 1750, the measles and "canker-rash" were rife; and in the following year, the dysentery prevailed. In 1756, the "canker-rash" was again prevalent; and in 1775, there occurred a "lung fever." In 1777, both small-pox and dysentery were rife; and of the latter disease, which prevailed extensively also in the towns of Greenfield, Shelburne, and Conway, there died in the first, fifty—in the second, eighty—and in the third, seventy-three. The population of these places were, in the order of their occurrence, 900, 700, and 1000. As these deaths occurred during the "*season*," which may be estimated at three months, it follows that the mortality must have been much higher than what occurred at Rondout. Thus, among 1000 inhabitants, the ratio of mortality per month was, at Greenfield, 19—at Shelburne, 39—at Conway, 24—and at Rondout, only 7! From 1792 to 1795, the "canker-rash" again prevailed extensively in Deerfield. In the spring of 1803, Deerfield had a visitation of the measles as an epidemic, which was "followed in the summer by one of the most severe and mortal dysenteries which ever prevailed in this part of the world." At Conway, where it also was prevalent, the total of deaths for this year, in a population of 2000, was 84, of which sixty were from the dysentery; and as regards Deerfield, our author remarks:

> When we recollect that the disorder did not spread much out of the main street, and that it was confined almost to a population of not over 500, we come to the conclusion, that it was almost as fatal as the yellow fever in Philadelphia in the year 1793, in proportion to the number of inhabitants.

In 1807, the "spotted fever" prevailed at Deerfield; and as regards its virulence of action, Dr. W. gives the following example, which more than rivals even the Rondout fever:

> To show the rapidity of the action of the complaint, I will mention the fact that my father was attending upon an obstetric case in that neighborhood, when one of the attendants, an aged lady, was taken unwell and went home. She grew worse and sent for him, but he could not be spared. He went to her as soon as he could be released, which was in the course of an hour or two. When he arrived, the old lady was in the agonies of death, and she very soon expired. Very soon after, a little grand-daughter of the old lady was attacked in my father's arms, with the same complaint, and in a few minutes it died. While the attendants were laying out the old lady and child, the mother of the child and

daughter of the old lady, were attacked with the same complaint, and in less than twelve hours from the first attack of this fever in this family, the grandmother, mother, and the grand-daughter lay corpses in the same room!

Early in the winter of 1814, a malignant epidemic, the pneumonia typhoides, or *war-fever*, as it was called, in consequence of having first appeared in the army, on the Canadian frontier, made its appearance at Deerfield; and in this village, in the short space of two months, it destroyed twenty-eight persons.

"This complaint," says Dr. W., "was confined almost exclusively to old people; and it is a fact worth noticing, so far as my observation extended, not a person over sixty years of age, ever recovered from an attack of it. It was extremely mortal, and the symptoms rapidly ran on to typhus, and speedily terminated the life of the sufferer."

In 1831 and '32, the scarlet fever was very prevalent in Deerfield and the surrounding country; and in the former year, there were fifty deaths in Deerfield, principally from this disease. In 1841, dysentery was again rife in Deerfield, the disease seeming "to follow the course of streams."

These are, of course, only the principal epidemics with which this locality was visited in the course of a century; and these facts are here presented merely to show that the violent disease at Rondout is not a phenomenon without numerous parallel instances, in many of our most healthy localities. Even at Rondout, during the same period of the preceding year, as before stated, the mortality from dysentery and scarlatina was equally high.

We will now lay before our readers the private correspondence of the Mayor, as President of the Board of Health, and of the Resident Physician, showing that a disease, in many respects analagous to that which prevailed at Rondout, has appeared in other localities, and that the individuals affected had had no connection either with Rondout or the schooner Vanda.

Cases I. and II.—These cases occurred at Yonkers, a small village, situated at the mouth of a stream emptying into the Hudson, twenty miles from the city of New York. The following letter from Dr. Gales was in answer to one addressed to him by the Resident Physician:

Yonkers, Sept. 21st, 1843.

Dear Doctor,—By your request I send you some of the particulars of the most severe case of fever that has occurred here this season.

William Kerr, aged 32, of good habits and sound health, was attacked with symptoms of fever in the evening; and after passing a restless night, he sent for me early in the morning of the 18th August. I found him with a strong, full pulse, whitish loose fur on the tongue, offensive breath, great heat and thirst, a little nausea, violent pain in the head, back, and limbs, with a sense of fatigue and restlessness, urine scanty and high-colored, and bowels natural. V. S., cold applications, &c., partially relieved the head. From the effect of medicine, he threw up some, and discharged freely of very bilious matter. These symptoms continued nearly the same till the 21st, when there was a slight remission.

On the 22d, all the symptoms were more severe; skin and eyes yellow, occasional delirium, extreme thirst with burning sensation in the stomach, and

very obstinate singultus, tongue but little furred, darkish and dry in centre, and breath very offensive.

23d. Hiccup continuous, yellowness intense, extreme thirst, very restless and sinking, sense of weight and burning at stomach, threw up at different times, a pint of dark coffee-ground matter.

24th. Throws up some, and discharges some of same matter from bowels; very restless, and nearly senseless; died at three that night.

Another young man died about twelve days after, on about the thirteenth day of his disease, whom I did not attend; but I am told his symptoms were similar, but not so urgent.

I have had a few other cases of bilious fever, all recovering. These diseases are all endemic, and entirely non-contagious. Yonkers is a healthy town; it has mostly a gravelly soil; and it is as healthy this year as usual.

Very truly, yours,

A. W. Gates.

Alex. F. Vache, M. D., Resident Physician, N. Y.

Being further interrogated by Dr. Vaché, he wrote as follows:

Yonkers, Sept. 26th, 1843.

Dear Doctor,—Kerr, whose case I described, had not been out of Yonkers in months, excepting occasionally to New York. He was last there two weeks before he sickened, called on one or two men in Hudson street, with whom he had business, and returned the same day that he went.

The other man who died had not been out of the town for some weeks previous to his sickening. As I have never seen a case of what would be called an epidemic yellow fever, I therefore could not pretend to identify the black vomit. That which Kerr threw up was unlike the dark jelly bile of a greenish tint, which is often vomited in fevers, and as unlike the same substance which I have seen, with a Spanish brown tint; but it was of a dark brownish color in small granules or flocculi mixed with, but not dissolved in, mucus, or what had been taken into the stomach, and it had little or no odor.

It will always give me pleasure to give any information of the kind, if in my power.

Yours very truly,

A. W. Gates.

From the description here given, we will allow every reader to draw his own conclusions as to the character of the disease of which these men died, especially the one named Kerr. Dr. Gates himself considers "these diseases as all endemic and entirely non-contagious;" in other words, he looks upon Kerr's case as one of *domestic* yellow fever. Kerr died on the sixth day of his sickness, which is just the average of the cases at Rondout, independent of having a striking peculiarity in some of the symptoms. Now, according to the second letter, neither of these men had had any connection with Rondout, with the Vanda, or with any supposable cause of infection of imported origin. The day on which Kerr took sick, the Vanda was innocently taking in her coal at Rondout.

Since the above has been put into the hands of the compositor, a report has gained circulation in this city, that Kerr, who was a dealer in mahogany, had gone, in the port of New York, on board of a vessel from St. Domingo, laden with that kind of wood. To ascertain the truth of this rumor, Dr. Vaché wrote to Dr. Gates a third time. The following is the reply:

Yonkers, Oct. 15, 1843.

Dear Doctor:—Yours of the 10th inst., was duly received; but I could not till now obtain the information I wished. Kerr, in company with two other men, was engaged in the business of *sawing* mahogany, at Yonkers, for the ma-

hogany dealers in New York. They do not, however, receive the timber from the vessels, nor does their business ever call them on board of vessels. When Kerr was last in town, two weeks before he sickened, he went and returned the same day, with a neighbour, who tells me that they were together all the time, except about one hour—that they were not on board nor near any vessel, and that he does not believe that Kerr was on board any vessel during that hour of absence, for he said that he had business with a man in the city. Kerr's wife and his two partners say that he had not mentioned to them any thing about having been on board a vessel, and that he was not in the habit of going on board; nor do they believe that he did so.

It was reported here about the time of his death that *the vessel* which went to Rondout, was loaded with mahogany, and that Kerr went on board of her to make a purchase, when she was opposite to Yonkers; but this report we all know to be untrue. Yours very truly,

A. W. Gates.

Dr. Alex. F. Vache.

Cases III., IV., V., VI., VII.—In the latter part of August, there occurred in the city of New York, five cases of disease, of which several partook strongly of the epidemic character. Two of these are referred to in a following affidavit, made before his Honor the Mayor, by Cooper; a third is the case of Dr. Atkins, described below; and four other cases, two of which are included in Cooper's depositon, are furnished by Dr. E. Conway. These five cases are here associated in consequence of an obvious connection. Two of them proved fatal, with strongly marked symptoms, in the way of yellowness of skin and eye, and a vomiting of blackish fluid, designated, by some, *black vomit*. The following affidavit, taken by the Mayor, in the words of the deponent, gives the history of two of the cases, of which, one recovered.

City and County of New York, ss.

Charles Cooper, of 289 Pearl-street, of the City of New York, being duly sworn, deposeth and saith, that he is the brother of David Cooper, who died at his house on Sunday morning last, about 3 o'clock.

And this deponent further saith, that this deponent and the said David Cooper owned the sloop Accommodation, which vessel they used as a lighter. And this deponent further saith, that on Thursday the 24th day of August last, the said David and deponent, with the said sloop Accommodation, were engaged in lightering beef and pork in barrels from the ship Charles of Portsmouth, New Hampshire, from New Orleans, from the dock of Mr. Tooms, at Brooklyn, to the packing yard of Mr. John Lewis, between King and Spring streets, in the City of New York, on the North River. Deponent continued along side of said ship on Friday, but his brother on that day was engaged in lightering grain from a schooner from North Carolina, which was at Coenties-slip, in the City of New York, to Jersey City. He had a small scow schooner, the Lucy Jane.

And this deponent further saith, that on Sunday the 27th of August, the said David was on board said sloop Accommodation. On Monday, the 28th of August, they, that is, deponent, his brother David, the boy Michael, James Creegy, a carpenter, and John Faileuson, took the sloop around to the said packing yard, and discharged the load. They then took the sloop up to the ways at Sixteenth street, belonging to Mr. Burtess, near the Gas Works. On Tuesday the 29th, about eleven o'clock, they got her on the ways. They all, viz., deponent, brother David, the boy Michael, James Creegy, John Faileuson, and George Dutton, worked at her. They were all more or less in the water performing the work. On Tuesday night they all worked as late as they could see. When they left work, the boy Michael and James Creegy went on board, the other went home, deponent and John Faileuson rode down, and his brother walked down to 289 Pearl-street. After supper brother walked up; he came down to see a young lady.

On Wednesday morning, when deponent got to the sloop, about half past six o'clock, he found his brother lying in the bed cabin; said he felt sore and weak, so that he could not get up. About half past ten or eleven o'clock, he came down the side of the vessel and said he would go home. He then took my little boy with him and said he was going to ride home. When deponent came home at night, found him on the bed sick. On Thursday morning, left him sick and went back to his work. When deponent got to the sloop on Thursday morning, he found Michael sick, making the same complaints as his brother did the morning before, and found him in the same bed his brother had occupied the morning before. About half past eleven o'clock on Thursday morning, the boy Michael came out of the vessel and went to ride home; he lived with deponent's brother, William Cooper, at 98 Roosevelt-street, since which deponent hath not seen Michael.

When deponent came home on Thursday night, found brother worse. On Friday morning his brother sent for deponent and stated he wished to go in the yard. Deponent assisted him; he was very weak; when he came from the yard, he laid on deponent's bed down stairs; he went up stairs at night; was assisted down again in the morning, Saturday, and remained and died there on Sunday morning at three o'clock.

The first of his complaining was weakness, pain in his back, head-ache, soreness in his bones; when he died he vomited very heavy, which was very black, like coffee grounds. Should think he threw up from a pint to a pint and a half. His eyes were bloodshot; he looked natural before death; he was taken from the house about 11 o'clock, and had then changed to a deep yellow color. The material which he vomited stained like ink. When they were engaged clearing the vessel, the water and atmosphere around her was very offensive from the effects of the Gas House. Both the carpenters, George Dutton and James Creegy, have been complaining since. Creegy has complained of a head-ache and pain in his stomach. Dutton said to-day he had been in the house all day Sunday and to-day; he said he did not feel like work. Michael complained just as David did. Dutton and Creegy were not at the ship Charles.

Faileuson has since been steady by the sloop painting her; Charles Cooper has been about her. No one slept on board of her since. Dutton never slept on board of her. Creegy is now at 98 Roosevelt-street, and Dutton is corner of Water and Governeur Market—he keeps house there.

Doctor Conway attended to both these cases. All of them got their dinners on board.

Mayor's Office, September 5th, 1843.

But we have also the testimony of a medical man in reference to these two cases, Cooper and Creegy, as well as to others connected with them. We are indebted to Dr. E. Conway for the following note in reply to certain interrogatories made by ourselves:

Aug. 29th, I was called to see a young lad, named McGee, boarding at 98 Roosevelt-street. His symptoms were those of strongly marked remittent fever. There was another person, James Creegy, sick in the same house, whose symptoms were very similar, but of a milder form, yielding readily to treatment. I mention these cases, as well as a third in an individual named George ——, who, however, was not seen by me, as being all connected with the fatal case (Cooper), referred to by Dr. Vaché. These four men, engaged in loading and discharging vessels in the harbor, were at this time employed in scraping the bottom of a vessel, at the foot of 16th or 17th street, on the North River, near the Manhattan Gas Works; to the bad smell of which they attributed their sickness. All sickened at the same time, but Cooper alone died; the next severest case being that of McGee, who was sent to the Hospital.

Sept. 1st, I first saw Cooper, who boarded with his brother at 269 Pearl-street. His habits were temperate, and he enjoyed previous good health. When I first saw Cooper he had been sick three days. I found him complaining of intense pain in the eye-balls and forehead, having a small, feeble pulse,

cold, clammy skin, face and neck flushed, eyes red and glassy, pain at the præcordia, with a tendency to vomit, tongue coated but not furred, urine scant, and great thirst. Ordered calomel, grs. xv., with soda powders for drink, and mustard to the epigastrium. Next morning I found him with eyes and skin of face and neck of a deep yellow hue. The medicine had acted once or twice, but not well. I did not see him again that day, as his friends proposed sending him to the Hospital. I was sent for that night at twelve o'clock, but could not go until eight o'clock next morning, when I found him dead. Upon inquiry, I was told that he had become delirious during the night, and died at three o'clock; but previous to this, he had vomited about a pint of black ropy liquid, which left a dark stain upon the sheet, even, as I saw myself, after being soaked in water.

The last of this group of five cases was reported by Dr. D. Atkins, to the Resident Physician, who made the following note of the case:

Dr. Atkins reports that a boy, named Condry, was attacked on board of the ship Delia Walker, lying at a pier, east of Coenties-slip, last from Liverpool. He was attacked with an apparently mild form of fever on Friday, (Sept. 1); he continued in this state until about twelve hours before he died, when he was attacked with violent delirium, petechiæ, black vomit, suppression of urine, etc. He was removed from the vessel on Saturday morning to a private house, No. 13 Broadway, where he died on Tuesday, the 5th. His body was removed and interred in a private vault, in the Methodist burying ground, 19th-street. He was a son of the owner of the ship, and he had been sleeping on board for three weeks.

The following note in reference to the same case is by his Honor the Mayor:

Dr. F. U. Johnson, who was sent for by me, stated that he was called in consultation in the above case. He informs me that he does *not* consider it to have been a case of yellow fever. He deems it to have been a case of bilious remitting fever, such as is usual at this season in New York.

Here then, are five cases, two of them fatal, in the city of New York, constituting apparently a group belonging to *Coenties-slip*. But as this is a point upon which our evidence is not wholly conclusive, we can perhaps do no more than approximate the truth. The four cases mentioned by Dr. Conway, it would appear, according to the affidavit of Cooper, had their origin in one of the following sources: 1. The ship Charles from New Orleans; 2. The vessel from North Carolina which they were engaged in lightering in Coenties-slip; 3. Their own sloop, Accommodation, whose bottom they were scraping at Sixteenth-street; 4. It was endemic either to the locality of the gas works, or to that of Coenties-slip.

Now, as the ship Charles arrived here from New Orleans on the third of August, twenty-eight days' passage, the port healthy, and all persons on board (sixteen) well, no infection can be ascribed to her. The same may be said of the other vessels. But as regards the several localities, the cases would seem, for two reasons, to be *endemic* to that of Coenties-slip. The first reason is, that this slip is near Coffee-house-slip, where five cases, it will be seen, subsequently also occurred; and the second is, that the case reported by Dr. Atkins occurred in this slip, and on board of a ship last from Liverpool, which cannot be well supposed to have introduced the disease. Moreover, Cooper swears that "Dutton and Creegy were not at the ship Charles," and yet both

these men complained similarly, the latter having, according to Dr. Conway, a mild form of remittent fever.

Cases VIII., IX., X., XI., XII.—All these cases have manifestly some connection with *Coffee-house-slip*, in New York. Three of them were from the schooner Juliet, and one from the schooner Bergen, both from Petersburgh, Virginia, and the remaining one, which proved fatal, was the mate of the schooner Ann, from Baltimore. The following letter, in reference to the last case, is from J. T. Harrison, M. D., whose opinion upon this subject is entitled to much consideration, in consequence of having been in former years the Health Officer of this port:

Staten Island, September 17th, 1843.

Sir,—I was requested yesterday at 12 o'clock, to visit with Dr. Clark, of Port Richmond, Mr. Peter Latourette, a patient of his, lying ill at Bergen Point, on the opposite shore of the Kills from this place, in New Jersey. I found him in the last stage of a fever of a very suspicious character, exhibiting, as it assuredly does, many, if not all the symptoms of *yellow fever*.

I learned that Mr. Latourette had become indisposed on the preceding Sunday, the 10th inst., but not so seriously as to require a physician until Tuesday the 12th, when Dr. Clark was called to see him. Nothing appeared in his case to excite surprise until Friday. Without going into any minute detail of symptoms, it is sufficient for me to say, that the case is accompanied with all the indications of malignancy, in the smoky yellow eye and skin, mahogany cheek, hæmorrhage, and dark colored discharges from the stomach and bowels, which I have so often witnessed in former years at the Marine Hospital, when under my charge. As the case seems to have originated in the city, and under circumstances calculated to excite attention at this season of the year, it is proper for me further to state, that Mr. Latourette is mate of the schooner Ann, of New York, Captain D. Latourette master, now lying at Coffee-house-slip, where she arrived about the 4th or 5th instant, from Baltimore, and that she is a new vessel, this being her first voyage to any port. Mr. Latourette remained on board until the Saturday preceding his sickness on Sunday—say about one week. He on that day visited the schooner Bergen, lying near him in the same slip, the mate of which vessel was then sick with a disease similar to that which Mr. Latourette has since been affected with. The mate of this vessel (a Mr. Swain) has since been removed to this island, and is now said to be on the recovery.

I communicate these facts, sir, not from a wish to produce alarm, but only for your private information, as President of the Board of Health, in order that as the disease in question seems to have had its origin at Coffee-house-slip, if other cases of a similar character should occur in that vicinity, your attention may in time be directed to the spot, and such precautions taken to prevent its extension, as you may deem necessary.

With great respect, I am sir, your obedient servant,

J. T. Harrison.

Hon. R. H. Morris, President of the
Board of Health, New York.

N. B. Mr. Latourette died last night at nine o'clock. As Mr. L. appears to have been taken sick within six or eight days after his arrival from Baltimore, his disease may have been contracted at that port, as there is so much intercourse between that place and the West Indies, and perhaps much laxity in the execution of the quarantine laws.

Dr. Harrison here very prudently reports his case for the private information of the Mayor, so that, in the event of the occurrence of other cases of a similar character in that vicinity, his attention might in time

be directed to the spot; and this contingency was actually realized, for, besides a Mr. Swain, referred to in Dr. Harrison's letter, three other cases were soon reported to the Mayor from Coffee-house-slip.

As regards the case of this Mr. Swain, who recovered from his disease, the following extracts from the letter of Dr. D. A. Edgar, furnish full information:

On Saturday, the 9th instant, I was sent for to see young Mr. Swain, but not returning home till late in the evening, I deferred my visit till Sunday morning 10th. I then found my patient with the following symptoms: slight pain in the head, more severe in back and extremities, tendency to perspiration, pulse rather small, beating from eighty to eighty-five in a minute, considerable irritability of the stomach, tongue covered with a thick yellowish fur, mouth moist, slight thirst that was easily allayed by taking drink. As I did not consider his symptoms alarming, and as I wished the irritability of his stomach to become somewhat allayed before I gave him medicine, I gave some general directions for his management during the day, and I left a dose of calomel to be taken at night at bed time, to be followed with salts and senna in the morning.

Monday 11th. Very little alteration in the symptoms; for although in the evening there was an increase of pain in his head, and other febrile symptoms, I found him this morning quite comfortable. He took the calomel as directed, and also the salts and senna. The calomel caused him to vomit once or twice during the night, and the salts and senna were rejected. Just before I entered this morning, *he vomited a small quantity of dark green matter, with little black flocculi floating in it;* and I must confess to you that I felt a momentary alarm for my patient's safety; but when I turned from the basin to the examination of his symptoms, I prognosticated what the result has proved to be correct, that my patient would have a mild attack. The calomel moved his bowels two or three times gently, and as his stomach continued to be irritable, I directed the free use of mustard plasters.

Tuesday 12th. A slight change for the better. Last night about seven o'clock his mother perceived a little coldness of the feet; and for three or four hours, he was restless with hot skin, pain in his head, &c., but the latter part of the night he slept well, and expressed himself more refreshed this morning. His tongue still continued furred, or this morning I should have considered him in a proper state for quinine.

Wednesday 13th. Patient passed a very comfortable night, and is decidedly better.

Thursday 14th. Another good night—doing well.

Friday 15th. Convalesence decidedly established. On the morning of my first visit my patient gave me this account of himself: that, during the week preceding, he had worked very hard unloading his vessel; that on Thursday of that week, he worked unusually hard, retired to his berth in the evening very tired, and neglected to draw his curtains; that on Friday morning he awoke with pain in his head, back, and bones, and with sickness of his stomach; that on Friday morning he took a dose of salts, and feeling no better on Saturday he concluded to come home.

In this case, the only striking feature is, the vomiting of dark green matter, having suspended in it black flocculi.

The three other cases from Coffee-house-slip, all having the same general features, occurred on board the schooner Juliet, from Petersburgh, Virginia. Two of these, we saw at the Marine Hospital, at the Quarantine.

Now, the question here arises: Did these five individuals, arriving at Coffee-house-slip in three vessels having no relation to one another, and sailing from two distinct and healthy ports, Baltimore and Peters-

burgh, bring with them the seeds of their diseases? Or, on the other hand—Were these five cases of fever endemic to Coffee-house-slip? Upon the doctrine of probabilities, keeping in view the five cases occurring at the adjoining slip, we must necessarily draw the latter conclusion.

That these five cases of disease, as well as the five at Coenties-slip, and the two at Yonkers, are *indigenous*, all evidence goes to prove. No one of course pretends that they had had any connection with the Vanda, or the locality of Rondout; nor is there any evidence otherwise to prove a foreign source in these ten cases, not to speak of the two at Yonkers. Dr. Conway, who witnessed the yellow fever epidemics of 1819 and 1822, told us that he could not distinguish Cooper's case from those then regarded as genuine yellow fever; but this remark, he said, did not by any means necessarily imply with him a foreign origin. If Cooper's case was *imported* yellow fever, then the same cause, it may be inferred, produced in his comrades mild remittents. As the period of sickness in these four fatal cases, Kerr, Latourette, Cooper, and Condray, as well as two in the New York Hospital to be yet described, was in every one five or six days, there is in this respect, as well as in some others, a marked analogy with the fatal cases at Rondout.

There occurred another group of cases in the city of Brooklyn, as we learned from Stephen R. Harris, M. D., Health Commissioner; but as our efforts to obtain the facts have not been crowned with any success, we are unable to illustrate the subject farther by means of these cases.

Case XIII. and XIV.—For these two cases in the New York Hospital, we are indebted to the House Physician, Dr. William W. Jones.

Thomas Wood, England, gardener, was admitted Sept. 17. About six weeks ago, after exposure, he complained of chills, pain in back, and other febrile symptoms; but from this he recovered and continued pretty well, until four days ago, when he spent the evening in the bar-room of French's Hotel, Catharine-slip. Here he drank some beer, and retired to bed at ten o'clock. An hour after, he was seized with headache, griping pains in the abdomen, and vomiting, the skin assuming a yellowish hue. A physician was called in, who administered some powders, which purged him freely. A blister was also applied over the abdomen. On the evening of the 16th, he vomited a dark brown matter; and during that night and since, he has passed his urine and fæces involuntarily. At visit on Sunday morning, his skin was cool and moist, pulse about 85 and feeble, perfectly rational; complained of pain in his head; there still remained some tenderness of abdomen, and his tongue was covered with a slight yellowish coat, disposed to be dry. On admission in the afternoon, his skin was hot, pulse full and of good strength, tongue pale and moist, considerable diarrhœa of bilious stools, eyes somewhat yellow; he spoke but once after admission, and would not protrude his tongue.

18th. Is able to swallow liquids only, skin dingy yellow, conjunctiva of a yellowish hue, pulse 140, soft and compressible, feet somewhat œdematous, tongue pale, clean, and rather dry, passes his urine and fæces involuntarily; passed a restless night, diarrhœa continuing through the night, abdomen free from tympanitis and tenderness; was put upon pulv. Doveri and sulph. quinine grs. iv., every two hours; cold to head. Died at 10 P. M.

Post-Mortem, thirteen hours after death. Body not emaciated; in the brain, in addition to some congestion of the posterior part, there was slight effusion of serous fluid into the cells of the arachnoid; chest—lungs post mortem congestion of posterior and inferior part; heart, rather flabby; abdomen—liver of rather a

dark brownish red color, the biliary ducts full of bile, a healthy appearance; the gall bladder also distended with the same; spleen not much enlarged, but the tissue softened; stomach perfectly natural, mucous membrane pale, not thickened, or altered in any way; at the upper part of the ilium, the lining membrane was red, apparently inflamed; some enlargement, but no ulceration of Peyer's plates; other portions of intestinal canal, healthy.

John Smith, American seaman, aged 25, was admitted September 12th, into the 9th ward of the Marine Hospital. He is a stout, well-built man, and has been principally employed on board of vessels in the coasting trade. Three weeks since he arrived from Boston, and during this time he has complained occasionally; but he was able to be about until three days since, when he was laid up with a chill followed by fever, &c.

When admitted, there was much muscular debility. He appeared tolerably rational, though slow and unwilling to answer, so that from him but little could be learnt concerning the origin and course of his disease. His conjunctivæ were red and injected, and his skin of a yellow color, hot and dry; pulse apparently natural both in force and frequency; tongue moist, with a thick fur; thirst; complete loss of appetite. He had vomited before he came to the house. The case altogether had very much the appearance of one affected with a severe gastro-hepatic derangement. A mild emetic was prescribed.

Sept. 13th. During the night he was very restless, and at times delirious. His bowels have been freely opened twice, the stools being perfectly natural both in color and consistence. His urine is of a very deep orange yellow color, and the skin of the thigh is stained by it, as if pure bile had been applied to the part. The skin is more yellow, not so warm, the extremities rather cool. Tongue less furred, but still moist. Some tenderness of the epigastrium when pressed. Pulse is soft but not frequent. Debility increased.

Sept. 14th. He continued during the day, yesterday, in pretty much the same condition. He has been taking wine, but this has been administered with great difficulty, owing to the patient's clenching his teeth. He died early this morning, without the occurrence of any new symptoms, except that he became comatose toward the last. He died without any vomiting.

Necropsy six hours after death.—The body was but little, if at all, emaciated, the limbs rigid, though not very cold. The skin and conjunctiva of a bright lemon yellow color, and this tint pervaded most of the other tissues examined.

Some congestion of the vessels of the pia mater, with slight effusion of serum into the cells. The substance of the brain tolerably firm, presenting no abnormal appearances.

Nothing peculiar was found in the lungs or heart. The larger vessels contained considerable watery blood.

The liver was in general of an orange yellow color, and rather dry when cut, here and there somewhat rosy from minute vascular injection; gall bladder empty, contracted. The spleen was very little enlarged or softened.

The stomach contained about two ounces of a brownish-black matter, consisting of small distinct flocculi, mixed with the thick ropy mucus which covered the lining membrane. This last was throughout thicker than natural, slightly reddened, tearing easily when raised by means of the forceps. Near the pylorus it was mamelorated. The blackish matter mixed with mucous was found in small quantity throughout the whole of the small intestine. The aggregated glands were not at all enlarged, but a few of the patches on the inferior portions of the ileum were rather red; and a few of the solitary glands increased in size.

There is nothing in the history of these two cases, by which we are enabled to trace them to a particular locality. The latter has some strongly marked features approaching yellow fever; but no one among the experienced physicians of the New York Hospital, ventured to call it by that name. Both died about the sixth day, in which circumstance,

as well as in others, they resemble all the other fatal cases, inclusive of those at Rondout. In the absence of any knowledge to the contrary, we will place them in the category of the rest—the *indigenous* class.

We are indebted for the following description of a case of "*Southern Bilious* Fever," occurring in Pearl-street, to Dr. E. Wood of this city:

The patient, a Mr. J. C. C., was mate of the brig Philura, which vessel he left at Savannah, to take passage home in the brig Exact, in consequence, as he alleged, of being sick; and he stated to his family that a physician whom he had consulted in Savannah, told him that he had, or was sickening with, yellow fever. Whether this is true or not, is more than I know. At my first visit he expressed his decided conviction that he was laboring under the yellow fever, and he reiterated it repeatedly during his sickness. Since his death a shipmate of his, name unknown, stated to his family that a hand and two passengers had died of yellow fever at the City Hospital, from on board the same vessel. Of these matters I have no personal knowledge.*

Mr. C., a stout, able-bodied man, arrived here from Savannah, in the Exact, about the 18th or 19th of September, after a passage of seven days. I saw him on the day of his arrival, when he complained of the ordinary symptoms of fever, as pain in the head, back, and limbs, heat of skin, thirst, vascular excitement, brown furred tongue, severe gastric irritation, bilious dejections, vomiting, and a deep yellow tinge of the skin and eyes. This last peculiarity, in connection with the severity of the general symptoms, left no doubt on my mind as to the nature of the case. I had before seen cases of similar character, which are of frequent occurrence here, in the fall, among persons arriving from southern ports; and it is known as southern bilious fever.

The evacuations, though decidedly dark, were not remarkably so. In the vomiting there was at times a sediment, apparently mucus, of a dark bilious hue, but nothing resembling coffee grounds or black vomit. In the commencement, the disease seemed amenable to medicine, and the violence of the symptoms very considerably abated. But on the third or fourth day he had bloody stools, (which were soon checked and did not return,) with renewal of the vomiting in small quantities, (not peculiar in character.) The vomiting continued throughout the disease, rendering it difficult to retain anything on the stomach except water in a small quantity. During the exacerbation of the fever, especially toward the termination of the case, he could not swallow, nor could he speak so as to be understood, though apparently understanding the question addressed. During this stage, he would be perfectly helpless and pass his evacuations involuntarily; and yet, with the morning remission, he would rally again, help himself out of bed, take some little nourishment, and give some hope of recovery. With the next accession of the fever, however, he would be sure to be again prostrated. The disease alternated in this way for the last two or three days; and, on the evening of the 26th of September, he expired. Decomposition was extremely rapid, and the effluvia on the following morning were insupportable.

Cases precisely similar to this, we occasionally saw in Florida, during a service of nearly two years in the campaigns against the Seminoles. During the summer of 1836, the 4th Infantry stationed on the Suwanee river, suffered much from this form of remittent fever, characterized by yellowness of the skin and of the tunica conjunctiva, and by gastric irritability, and the vomiting of a fluid of a dark and greenish hue, sometimes containing flocculi.

* Two were admitted into Hospital from the brig Exact, and both were discharged cured. There was great yellowness of skin in each case.—Editor.

We have thus brought to a close our investigations upon this highly important subject, involving many of the fundamental principles of medical philosophy. As regards the question here at issue, we have avoided the narrow and contracted mode of inquiry, which limits our researches to the mere symptoms of the disease; and we have consequently endeavored to put the question upon the broad basis of those great laws in medicine, which time and experience have determined. It would, indeed, be difficult to find any question in medicine more objectionable to the mode of investigating it upon the exclusive ground of the symptoms of the disease, than this one; for, it is extremely difficult, in many cases, as before remarked, to decide whether a disease is yellow fever, or a malignant grade of the remittent form. In these latitudes, even when we really have a group of symptoms that would authorise us, nosologically, to pronounce the case one of yellow fever, a new question often arises,—Is the disease *endemic*, or is it of *foreign origin?* It has consequently been our earnest endeavor, throughout this inquiry, to determine rather whether the disease was foreign or indigenous, than whether merely the symptoms would justify the designation of yellow fever; and hence we have rigidly tested our deductions drawn from the symptoms of the disease, by those general laws of epidemics that medical science acknowledges. Under this view of the question before us, leaving every reader, at the same time, to draw his own conclusions, we think that the facts and arguments of this paper clearly establish the following

COROLLARIES:

1. The febrile disease prevailing at Rondout during the presence, and after the departure, of the schooner Vanda, existed there for weeks before her arrival, characterized by the peculiar symptoms of yellow suffusion of the skin and eye, preternatural slowness of the pulse, the vomiting of a dark greenish fluid with flocculi floating in it, and by great prostration of the vital powers.

2. It is proved statistically, in the way of *negative* evidence, that the Vanda had no agency in the production of the so-called Rondout fever; but as regards this point, the *onus probandi* lies on the affirmative side of the question.

3. It is proved by the private communications made to the Mayor and the Resident Physician of the city of New York, that a disease having features analogous to those above described, occurred during the same period in various localities; thus showing that the fever at Rondout was but the manifestation of a widely extended cause, constituting an epidemic.

4. The disease was consequently *indigenous* and *non-contagious;* and viewing its whole character, as evinced both by its history in connection with the philosophy of epidemics, and by its peculiar symptoms, the opinion would seem to be clearly warranted, that it is a MALIGNANT REMITTENT FEVER WITH A STRONG TENDENCY TO ASSUME THE TYPHOID TYPE.

ART. II.—*Classification of Sulphurous Waters, with an analysis of those of Avon, Livingston County, and Sharon, Schoharie County, New York.*—By SAMUEL SALISBURY, Jr., M. D.

THE ingredients which a mineral water contains, as foreign to pure water, will, in every case, be found to be such as serve to explain its curative effects in disease. There is no need of resorting to hypothesis or fancy; for, as is the case with all medicinal compounds, the medicinal character of a mineral water must depend on the properties of its constituents. All other modes of appreciating the virtues of mineral waters, and of establishing the proper indications for their use, must necessarily be imperfect. It will not be denied, however, that a successful empiricism and a comparison with other waters, the effects of which are known, and which are supposed to be similar, will serve to suggest some diseases and symptoms of disease which may be remedied by their use.

Sulphurous waters have been found in many parts of the United States, some of which possess valuable medicinal properties. The appellation *sulphurous*, has been given to those waters which contain sulphur united either with hydrogen, or with a salifiable base. Sulphur and hydrogen, when uncombined, produce a comparatively slight effect on the human system. Sulphur has been used as a purgative by physicians, in doses of from one to three drachms. Hydrogen, although not adapted to the long-continued support of animal life, may be respired, in large quantity, with perfect impunity. One hundred cubic inches of sulphuretted hydrogen contain only thirty grains of sulphur. Dupuytren and Thenard made some experiments in order to ascertain its action on the animal economy, and found that the presence of 1-1500th of it in air was instantly fatal to a small bird; 1-800th killed a dog, and 1-250th a horse.

The chemical constitution of sulphurous waters is very various; but it is believed that they all contain sulphuretted hydrogen either in a free state, or in combination. Their classification by European writers has been wholly founded on the difference in the mode of existence of the sulphurous ingredients. They are generally divided into *three* orders. The *first* includes all those sulphurous waters which contain free and uncombined sulphuretted hydrogen, (or hydro-sulphuric acid, as it is sometimes called,) without any excess of sulphur; that is, no more sulphur than is found combined with hydrogen in the form of an acid-gas, or with oxygen, forming sulphuric acid, which is one of the constituents of those salts called sulphates, with which these waters are often impregnated. This is evinced by the fact of their disengaging sulphuretted hydrogen by the action of acids, without precipitating sulphur. As there appears to be a want of accurate information in regard to the composition of many of our mineral waters, an analysis of several of this class is subjoined:

White Sulphur Springs, Virginia.

BY WM. B. ROGERS.

In a wine gallon, gaseous contents—

Sulphuretted hydrogen,	2.50	cubic inches.
Carbonic acid,	2.	"

Oxygen,	1.448 cubic inches.
Nitrogen,	3.552 "

Solid contents—

Sulphate of magnesia,	44.70 grains.
Sulphate of lime,	61.95 "
Carbonate of lime,	9.20 "
Muriate of lime,	1.63 "
Chloride of sodium,	1.44 "
Oxide of iron, a trace.	
Loss,	3.28 "
Total	122.20 grains.

2.—*Lower Spring, Avon, Livingston County, N. Y.*

In a wine gallon, gaseous contents—

Sulphuretted hydrogen,	10.02 cubic inches.
Nitrogen,	5.42 "
Oxygen,	.56 "

Solid contents—

Sulphate of magnesia,	49.61 grains.
Sulphate of lime,	57.44 "
Sulphate of soda,	13.73 "
Carbonate of lime,	29.33 "
Chloride of calcium,	8.41 "
Total,	158.52 grains.

3.—*Upper Spring, Avon, Livingston County, N. Y.*

By James Hadley, M. D.

In a wine gallon, gaseous contents—

Sulphuretted hydrogen,	12. cubic inches
Carbonic acid,	5.6 "

Solid contents—

Sulphate of magnesia,	10. grains.
Sulphate of lime,	84. "
Sulphate of soda,	16. "
Carbonate of lime,	8. "
Muriate of soda,	18.4 "
Total,	136.4 grains.

4.—*New Bath Spring, Avon, N. Y.*

By Lewis C. Beck, M. D.

In a wine gallon, gaseous contents—

Sulphuretted hydrogen,	31.28 cubic inches.

Solid contents—

Sulphate of magnesia,	8.08 grains.
Sulphate of lime,	3.52 "
Sulphate of soda,	38.72 "
Chloride of sodium,	5.68 "
Carbonate of lime,	26.96 "
Total,	82.96 grains.

5.—*Sylvan or Iodine Spring, Avon, N. Y.*

By James R. Chilton, M. D.

In a wine gallon, gaseous contents—		
Sulphuretted hydrogen,	20.68	cubic inches.
Carbonic acid,	4.99	"
Solid contents—		
Sulphate of magnesia,	12.96	grains.
Sulphate of lime,	80.42	"
Chloride of sodium,	97.44	"
Chloride of magnesium,	62.40	"
Carbonate of lime,	26.80	"
Carbonate of magnesia,	15.97	"
Vegetable matter,	.24	"
Iodide of sodium,*		
Total,	296,23	grains.

6.—*Sharon Springs, Schoharie County, N. Y.*

By James R. Chilton, M. D.

In a wine gallon, gaseous contents—		
Sulphuretted hydrogen,	.16	cubic inches.
Solid contents—		
Sulphate of magnesia,	42.40	grains.
Sulphate of lime,	111.62	"
Chloride of sodium,	2.24	"
Chloride of magnesium,	2.40	"
Hydro-sulphuret of sodium, Hydro-sulphuret of calcium, Vegetable matter,	2.28	"
Total,	160.94	grains.

To this order belong most of the Sulphur Springs in this country, which have been made the subject of analysis. Their effect upon the human system finds an explanation in the known action of sulphuretted hydrogen on the mucous membranes, aided, as it is, by the saline purgatives and diuretics which they contain. Their purgative operation is probably not increased, and in some states of the alimentary canal, is diminished by the sulphuretted hydrogen. This is shown by the fact, that the Avon water, when deprived of a portion of its gaseous contents by boiling, is commonly rendered a more brisk, though a less thorough and efficient purgative; and this conclusion is further established by the well-attested observation in regard to the White Sulphur water, viz., that although it contains less sulphuretted hydrogen and a smaller amount of active saline materials than the Avon, yet it operates as a purgative much sooner, with perhaps, however, a less extended and general influence. The action of the former, like that of the neutral salts, is supposed to be upon the stomach and small intestines more especially, while the large intestines and all the mucous membranes receive a powerful excitation from the latter, unattended, sometimes, with an immediate purgative operation.

* The quantity of iodide of sodium was not ascertained, as the little water sent was used in making the remainder of the analysis.

The *second* order of sulphurous waters comprises those in which the sulphuretted hydrogen is only found in combination, forming with bases existing in the waters, what are called hydrosulphurets. These contain no free hydrosulphuric acid, (sulphuretted hydrogen,) and no excess of sulphur. As an example of this order, the analysis of the waters of Barreges, in the Upper Pyrenees in France, made by M. Longchamps, shows that they contain carbonate of soda, hydrosulphuret of soda, subcarbonates of lime and magnesia, silex, azote, but no free sulphuretted hydrogen. (See Manual of Materia Medica by Edwards and Vavasseur.) European waters of the *first* order are considered doubtful remedies in pulmonary cases, and great caution is thought requisite in their use; whereas those of Barreges and of the Oriental Pyrenees, such as Escaldas, Vernet, and Arles, belonging to the *second* order, are viewed as peculiarly applicable to such cases, and have, for a long period, sustained a high reputation for their cure. This fact may be of much practical importance, and should lead to a thorough examination of those of the United States, the odour of which does not indicate the presence of a large quantity of sulphuretted hydrogen. From a recent analysis by Dr. James R. Chilton, the water of a sulphur spring at Sharon is found to contain hydrosulphurets; in consequence of the large quantity of free sulphuretted hydrogen which it also contains, it belongs to the *first* order, and may not, therefore, be adapted to pulmonary cases. The Red Sulphur Springs of Virginia contain a sulphurous compound, which Mr. Hayes, their analyst, has not named, but they contain four cubic inches of sulphuretted hydrogen in a wine gallon; they are, therefore, of the *first* order.

The *third* order includes those sulphurous waters which contain an excess of sulphur. Whether this substance supersaturates the *free* or the *combined* sulphuretted hydrogen, or how it exists in the water, I have never seen fully and satisfactorily explained. Those called the Clifton Springs, in the town of Phelps, Ontario county, N. Y., are probably examples of this order; for the stones, leaves, and branches of the trees, over which they pass, are found incrusted with sulphur in a pulverulent form. Immediately after it issues from the earth, this water becomes opaque and of a yellowish colour. At Aix-la-Chapelle, the dome of the vault which encloses the spring which supplies the "Emperor's" bath, is said to be incrusted with a fine, pulverulent, sublimed sulphur. This is opened at times, and the sulphur brushed off, which is sold under the name of "Aix Sulphur." The hydrogen, which flies off in a gaseous form from this water, is supposed to be supersaturated with sulphur; and hence the excess of this substance is deposited very soon after it it becomes aëriform. It is certain that the activity of sulphur waters as therapeutic agents, cannot be very much increased by this excess of sulphur. We should rather infer, that were this substance acidified by union with hydrogen, (of which there appears to be a deficiency,) and sulphuretted hydrogen formed, their effects on the human system would be more potent.

In order to explain with more clearness and precision the distinctive characteristics of the two last orders, Anglada, a French writer on the thermal waters of the Oriental Pyrenees, makes the following illustration: "Sometimes the union of an atom of hydrogen and an atom of sulphur, forms an acid, which, susceptible of the gaseous form, can be separated from its saline combinations without parting with its sulphur;

we then have what are called *hydrosulphurets*. At other times, this compound of an atom of hydrogen and an atom of sulphur acquires, especially when in combination with a base, the property of retaining larger proportions of sulphur, so that when we destroy these combinations by means of a stronger acid, we separate, on the one hand, this excess of sulphur in a concrete form, which is precipitated, and on the other, sulphuretted hydrogen in a gaseous state."

From this view of the chemical constitution of sulphur waters, it appears that they are all mineralized, either by sulphur in combination with hydrogen, or by sulphur in combination with hydrogen and a salifiable base, constituting what is called a hydrosulphuret. An excess of sulphur may exist, as is supposed, either in the sulphuretted hydrogen, or in the hydrosulphurate, forming a third order. The practical application of the foregoing classification to the waters of this country generally, I purpose making the subject of a future contribution to your valuable journal.

ART. III.—*Medical Jurisprudence,—being Notes of a Trial for Mal-Practice.* By CHARLES A. LEE, M. D.

The following documents, which have been placed in my hands, by one of the persons interested in the trial, of which they give a history, appear to me to possess sufficient interest to justify their being laid before the profession. If they do nothing more, they may serve to demonstrate the low condition of Medical Jurisprudence in this country, and the grievous wrongs and injustice which medical men are sometimes obliged to suffer, from the prejudices and ignorance of Judges, Lawyers, and Juries. We here see the testimony of some of the ablest physicians in the State of Connecticut, set aside as worthless, because it happened to interfere with the individual opinion of the presiding Judge, who, however respectable for his legal attainments, it appears but fair to say, laid down a principle as much opposed to the dictates of justice and common sense, as it is to the progress of Medical and Surgical science. Physicians, moreover, are not wholly faultless in this matter. Professional rivalry and the pride of opinion, have too often led them to appear rather as opponents and combatants in our courts of justice, than as impartial witnesses. The consequence has been, that in displaying a want of respect for each other, they have lost that of the court and the bar; and they, therefore, often meet with the utmost discourtesy, if not downright insult at their hands. How often do we see lawyers attempt to browbeat and disconcert physicians when placed upon the stand; and if they think it will contribute to the attainment of their object, they even add insult to rudeness, and thus gain, perhaps, by impudence and bluster, what would be denied to civility and candor. To such an extent has this practice been carried of late, that nothing short of actual imprisonment will induce some of our most respectable physicians to appear as witnesses in any case whatever; and if the profession generally would come to the same determination, we might calculate with considerable certainty, that a beneficial change would be the result.

In the Spring of the year 1829, the authorities of the town of Salisbury, Connecticut, in compliance with a law of the State, employed the physicians resident in the town, to vaccinate such of the inhabitants as had not previously had the Small-pox or Kine-pock; and for this they agreed to pay the sum of *fifty dollars*, to be divided among the physicians, according to the amount of labor respectively performed by each. It fell to the lot of Dr. A. Humphrey to vaccinate in five School Districts; but his health being infirm, he employed a student to perform the duty assigned to him; and for this service, the vaccinator was to receive the sum allowed. We continue the history in the language of the person alluded to, (now Dr. Rollin Sprague,) copied from his affidavit:

Thus situated, I commenced vaccinating, and proceeded to vaccinate most of those who needed it in the five school districts aforesaid. Doctor Humphrey vaccinated a few neighbors, and some who came to his house. I began vaccinating before Doctors Tichnor and Fish, and believe they commenced with virus obtained from my patients. Furthermore, I testify that I vaccinated between one and two hundred persons, according to the best of my recollection, about the time and in the school districts aforesaid; and amongst them Harriet Ann Landon, who was at the house of Mr. Lincoln. I suppose I did it well, as I heard no complaint at the time of performing the vaccination. There were several persons present at the time of vaccinating said Harriet Ann. I made two punctures, because the one first made bled. The virus was put in the other, which I think did not bleed. I observed her arm was engorged with blood, and bled from a very slight scratch. Whether this appearance was natural, or in consequence of the sleeve being tight around it, I cannot tell; but I am confident *both punctures were extremely slight, and that the true skin was not punctured.* The first complaint was made to me six or seven days after the vaccination, and not till the pustule was mature. I lived less than a mile from the said Harriet Ann. Further the deponent saith not.

(signed.) ROLLIN SPRAGUE.

From the affidavit of Cornelia Lincoln, we learn that she was present and saw Dr. S. vaccinate Miss Landon. She avers:

I saw him lay his lancet flat on her arm, and gently push the lancet into her arm. The arm bled so much that he did not put the matter into that incision; but made another incision in like manner, which did not bleed so much as the first, and in which he inserted a quill containing the vaccine virus. I do not recollect how far the lancet entered into the arm of the said Harriet Ann, at the time of her being vaccinated. I was acquainted with her the summer after she was vaccinated, living near where she did, and I often saw her carrying water from the brook near my father's house, to where she lived, but not with the arm on which the vaccination had been performed.

The first time I heard anything about Harriet Ann Landon's having a lame arm, was at the house of Capt. Evarts, about two miles distant from my father's, although I lived within twenty or thirty rods of the place where she resided. I heard of the lameness of the said Harriet Ann's arm at said Evarts, about one or two weeks after she was vaccinated. And further the deponent saith not.

(Signed) CORNELIA LINCOLN.

Mary Chittenden certifies as follows:

During the latter part of March, 1829, her niece, Miss Landon, then in the twentieth year of her age, came home and informed her that she had been to Mr. Lincoln's, and had there been vaccinated by Dr. Sprague, for the kine pock,

that she complained of pain in the arm running up to the shoulder, immediately after the second puncture, which was on the fore side of the arm. The arm continued painful, but Harriet stated that she did not know but the pain was caused by the doctor's squeezing her arm. She said he pressed it very tight. She went to winding spools on the quill-wheel, but soon left off, saying that her arm still pained her, so that she was not able to work; and after seven or eight days, the redness was as large as the top of a tea-cup, and while the inflammation continued, her arm was contracted close to her side, and her head was drawn close to her shoulder. In twelve or fourteen days, it began to get better; and after several days, her arm and neck relaxed, and returned to their natural state. But after this, she said that it did not get entirely well, but that she felt a constant bad feeling in the place where she was vaccinated; and if she used her arm to do hard work, a pain ran into her shoulder and jaw, and side of her neck and head. At the time the kine-pock was at the worst, she had a stiffness in her jaws, but she said they were never entirely set, and I never discovered them to be set, but only stiff. She did not complain of numbness under two or three days; but the first day she complained of a queer feeling in her hand. I told Dr. Sprague when he came the eighth day after vaccinating Harriet Ann, that I was afraid he had cut a nerve. He said it appeared like it, and it was possible he might, but it was nothing he could calculate for. When she showed me her arm, I saw two small punctures both a little bloody.

(Signed) MARY CHITTENDEN.

It appears from the testimony of other witnesses, (though they conflict somewhat with her own statements,) that these symptoms were merely temporary, and followed by no lameness or other serious inconvenience. The vaccination was skilfully performed, but nearer the elbow-joint than is customary; and the compensation which Dr. Sprague received for vaccinating five school districts, was some twenty dollars, averaging about four cents for each person vaccinated throughout the town. No other complaint was made except in the case of Miss Landon; the operation, in all the other instances, having been attended with perfect success. I shall pass over most of the affidavits which prove that she had the perfect use of her arm after the operation, as there is no testimony which conflicts with this admitted fact. Silas Mead deposes thus on this point:

During the time that Harriet Ann Landon was keeping school in town during 1831, in the summer just before she went to Litchfield at August court, she watched at my (his) house, with my wife, (who was then sick,) at two different times, and stayed at night and took breakfast in the morning. I had heard that she had a lame arm, and as my wife had to be lifted from one side of the bed to the other, I observed to her that I did not know but it might hurt her arm. She replied: "I guess not." She helped move my wife a number of times, and I did not discover but that she rendered as much assistance as any other female; nor did I discover which arm was lame, if either; and at meal time, I took particular notice, whether she favored one arm more than the other, and I could not perceive that she did; and I did not perceive but that she handled her knife and fork as well with one hand as the other.

The case came on for trial before the Superior Court of the State of Connecticut, held at Litchfield on the third Tuesday of August, 1832, Judge Daggett presiding.

During the trial, the following depositions were read:

I, Caleb Tichnor, of Salisbury, of lawful age, do testify and say, that I first saw the arm of Harriet Ann Landon about two years since, and heard the ac-

count of the vaccination, and subsequent symptoms, in substance as follows: That the operation was done at a neighbor's house, that the vaccine virus was inserted into a second puncture, because the first bled too much, and that she experienced no pain till some little time after the operation, she could not say how long, perhaps a few minutes, that since then she has felt pain in the arm both above and below the puncture, extending into the neck. She furthermore stated that she had been able most of the time since to do light work, that her arm did not pain her all the time, that she had used but little means to remedy the difficulty, and that when the arm was not painful, *talking* about it or thinking of it brought on the pain, and further, that her general health had been good from the time of the operation, and was so at the present time. Her arm at this time appeared to me perfectly healthy in every respect. I further testify and say, that I saw the arm again in February 1831, and that Miss Landon's statement and the appearance of the arm were the same as when I first saw it.

If the above statements of Miss L. contain the facts regarding pain, the inevitable conclusion must be, that if medical authority can be relied on, and if physiological and pathological facts are good for anything, that a nerve was *not* punctured or otherwise injured in making the incision. In persons of irritable constitution and habit, the symptoms of wounded nerves are frequently simulated in consequence of a very slight injury, such as the prick of a needle or pin, when the puncture does not extend through the skin. From the fact of the pain being induced by "thinking or talking about the arm," and other circumstances, I am compelled to conclude that Miss Landon's constitution is peculiarly irritable, and that slight causes would produce greater effects in her than in most people.

(Signed) CALEB TICHNOR, M. D.

We, the subscribers, of lawful age, do justify and say, by way of question and answer, as follows, viz.:

Questions by Dr. Humphrey. Have you a license to practice physic and surgery, as the law requires?

Ans. We have.

Quest. Have you a degree of Doctor of Medicine?

Ans. (By Drs. L. and C. Tichnor and George F. Hurd.) We have.

Quest. Have you examined the cicatrix or scar on Harriet Ann Landon's arm, where she says she was vaccinated and injured?

Ans. We have.

Quest. Have anatomists taught, or do you believe that there was danger of injuriously wounding the nerves of the skin, or any other nerves by vaccinating in that place?

Ans. Anatomists have not so taught according to our opinion, nor do we believe it.

Quest. Should you have expected that there was any danger of such an injury as that of which the said Harriet Ann, the plaintiff, complains of, in vaccinating a thousand persons at the same place?

Ans. We should not.

Quest. How deep should you think the fatty substance is under the place where the said plaintiff was vaccinated?

Ans. About half an inch.

Quest. Do not anatomists and surgeons generally teach that in cutting there is no danger of wounding nerves, tendons, ligaments, or blood vessels, on any part of the surface covered with adipose membrane (or fat) unless the cut goes through the fatty substance?

Ans. They do.

Quest. Should you think there was any probability from anything you can learn or discover on an examination of the arm, that in performing the said vaccination on said Harriet's arm, that the cut was made one half through the fatty substance?

Ans. No.

Quest. Should you think from the examination of the scar that the cut was through the true skin?

Ans. We should judge not.

Quest. Have you discovered, except from the said Harriet's own account, that there is now, or ever was any disease of her left arm, more than is common in vaccination?

Ans. No.

Quest. Does the said Harriet say there was any unusual swelling of the arm by reason of the aforesaid vaccination?

Ans. She informed us this day there never had been.

Quest. Did not the said Harriet inform you that there was no uncommon pain at the time of the aforesaid vaccination?

Ans. She did.

Quest. Had you seen Dr. Sprague about to perform the aforesaid vaccination, could you have told him it was a dangerous place?

Ans. We could not.

Quest. Should you from examining the arm of said Harriet, judge that there had been any want of skill, or carelessness in vaccinating said arm, or in taking care of said arm while getting well of said vaccination?

Ans. We should judge not.

Questions by the Attorney of the Plaintiff.

Quest. In what place upon the arm does it appear that said Harriet Ann was vaccinated?

Ans. It was a finger's width above the bend of the arm, and three and a half inches in an oblique direction from the point of the elbow when bent at a right angle.

Quest. Is that place the common and usual place of performing the operation of vaccination?

Ans. It is not.

Quest. Can you judge with certainty of the depth of the cut in vaccination from viewing the scar eighteen months after the operation?

Ans. We can with tolerable certainty in this case.

Quest. Can you in common cases of vaccination judge with certainty of the depth of the cut by viewing the scar eighteen months after the operation?

Ans. In cases where the ulceration has been great, we cannot, but in this case we think we can.

Quest. Can you judge of the degree of ulceration by examining the arm eighteen months after vaccination has been performed?

Ans. Generally we can, supposing the operation to be performed with a lancet.

Quest. Does the scar of the said Harriet's arm appear like other scars occasioned by vaccination, where the operation has been properly performed?

Ans. The scar looks very dissimilar to scars where the disease was genuine; yet we discover nothing in the scar that denotes the want of skill in the operation.

Quest. Do you think from the appearance of the scar that the matter inserted took effect?

Ans. We think that it took effect to produce a sore, but not the genuine disease.

Quest. Have you inquired of the said Harriet Ann how many incisions were made before the matter was inserted; if you have, what was her answer?

Ans. She informed us that there were two punctures, one above the other, and that he applied matter to the last; the reason why he made two was, that the first bled too much, and the last bled also.

Quest. Did she tell you that immediately after the incision, she felt a numbness in her hand?

Ans. She said she had no unusual pain immediately, but had numbness in her arm running down to her forefinger; but she afterward had pain.

Quest. Is it necessary in vaccination to make so deep a cut as to draw blood?

Ans. Yes, with dry matter.

Quest., by Dr. Humphrey. Was the place where Harriet Ann aforesaid, was vaccinated a safe place, from wounding the nerves, tendons, and blood vessels?

Ans. We judge it was.

Quest., by the same. Will genuine vaccine matter, skilfully inserted, always produce the genuine disease?

Ans. It will not.

Quest., by the same. From the conversation you had with said Harriet, did you get the idea, that some little time elapsed after the incision before she felt the numbness?

Ans. There was some little time elapsed after the incision before the numbness, according to our impression from her conversation.

Quest., by the same. Were you acquainted with Dr. Rollin Sprague; if so, what is his character as a physician?

Ans. We were acquainted with him when he vaccinated H. A. Landon aforesaid, and as to talent and medical science, he was above the mediocrity of his profession for a man of his age.

Quest., by the attorney of the plaintiff. Is the place where the said Harriet Ann was vaccinated, as proper a place as it would have been had it been further from the elbow joint?

Ans. It is equally safe as it regards the nerves, tendons, and veins, but should an inflammation take place, it would be more inconvenient.

Quest. Have you ever known, in the course of your practice, a person vaccinated in that place or so near the elbow joint before?

Ans. Not that we recollect.

Quest., by Dr. Humphrey. Was not the place where Harriet Ann was vaccinated a more suitable place than on the hand.

Ans. We think it was.

And further the deponents say not.

(Signed,) CURTIS F. HURD,
LUTHER TICHNOR, M. D.
CALEB TICHNOR, M. D.
GEORGE F. HURD, M. D.

I, Benajah Tichnor of the U. S. Navy, do testify and say that, having been requested by Dr. A. Humphrey to examine the arm of Harriet Ann Landon, on account of an injury said to have been received from vaccination, and not having been permitted to make the examination, the testimony that is here given, must be conditional and founded upon the testimony of others. And if this testimony in relation to the site of the operation be correct, that is, if the operation was performed at a point three and a half or four inches obliquely upward from the point of the elbow, and one inch from the bend of the arm when bent at a right angle, I have no hesitation in saying that there is no more danger of wounding a nerve at the point which I have designated, by vaccinating in the manner that the operation is usually performed, than there is at the place commonly selected for the operation; for I learn both from dissection and from books of anatomy, that the place selected for the operation in the case of the said Harriet Ann, is not supplied with any branches of nerves which would render any operation there on the integuments dangerous or objectionable on account of wounding a nerve. I furthermore testify and say that, on account of any injury that might result from wounding a nerve, I would as soon introduce a seton or perform any other operation at the point which I have designated as that where the said Harriet Ann was vaccinated, as any other point of the arm. And the deponent further says, that the place designated as that where the said Harriet Ann was vaccinated, is not the place where the operation is usually performed; although there is no place definitely fixed upon for performing the operation. And further the deponent saith not.

(Signed,) BENAJAH TICHNOR, M. D.

A history of the case having been laid before Professor Knight, as above presented, the following question was put:

Quest. Should such a case be presented to you, as above stated, should you infer from those symptoms and circumstances, that a nerve had been wounded?

Ans. The symptoms above enumerated, seem to indicate one of those cases of anomalous nervous affections which occasionally arise in consequence of very slight injuries, most frequently inflicted by small, sharp-pointed instruments, such as pins, needles, &c. I have seen similar cases, in which I did not suppose that any nerve was wounded, except those very minute nervous filaments which belong to the skin, as well as to all the sensitive parts of the body, some of which are, of course, wounded, when a wound is inflicted upon any of these parts. Surgeons, when speaking of a wound of a nerve, as being followed by unpleasant symptoms, do not intend to be understood as referring to these minute filaments, which make a part of the tissue of all sensitive portions of the body; but, of the trunks of nerves of some size, passing through the part wounded, to be distributed to some part, more or less remote. Thus, when speaking of wounds of a nerve at the bend of the elbow, in bleeding, they refer to a branch of a nerve of some size, which, passing through this part, is distributed principally to the hand and fingers. The symptoms above mentioned differ so much from those which are described as belonging to a wound of such a nerve, that I should not consider them to arise from such an injury. When consequences like these follow slight wounds, physicians usually consider them as resulting from some peculiarity of the constitution of the patient, rather than from the nature of the part wounded. Such is my opinion, and I should no more expect that symptoms like those above, would arise from a wound at the place pointed out, than from one made on any other part of the arm.

Quest. Provided there is a good thickness of cellular substance under the point above described, do you know of any anatomical or surgical writings, from which it could be learned, that the place is a dangerous one, on which to vaccinate on account of lasting injury?

Ans. I know of no anatomical or surgical author, who mentions this place as one to be particularly avoided in vaccination.

Quest. Is it not desirable in vaccinating, to avoid all sources that might irritate the pustule?

Ans. It is.

Ques. Is not any suitable place for a sore, a suitable place to vaccinate, and strictly within the surgical chart?

Ans. It is.

Quest. Should you think there was any danger in vaccinating a thousand patients at the above described place?

Ans. The place mentioned above, is not the one usually selected for vaccination; and although the patient might suffer more inconvenience from the inflammation of kine-pock in this place, than in some other parts of the arm, I should not expect any danger or permanent ill consequences, from vaccinating here. Ill consequences may follow slight wounds or inflammation in any part of the body. As to the ratio of danger from vaccinating in this place, I have not the means of judging.

Quest. Should you think that almost any place between the elbow and shoulder, was preferable to the hand for a vaccine pustule on a grown person; and is it not frequently made on the hand?

Ans. To the first part of the question, I answer yes; to the last, I have rarely, if ever, seen any one vaccinated on the hand.

Signed, J. KNIGHT, M. D., and Prof.

New Haven, Aug. 22, 1832.

Dr. Thomas Hubbard, Prof. of Surgery at that time in the Medical Department of Yale College, testified that the symptoms of the case

corresponded in great measure with what he had seen in cases known to have originated from puncture through the skin, and from injuries affecting parts deeper than the skin. The depth of the cellular membrane differs very much in different persons and in different parts of the body. I conceive that any wound of the superficial nerves lying beneath the true skin may occasion, in some rare instances, troublesome symptoms. I have known permanent nervous affection and lameness arising from wounds of the nerves, lying between the skin and the veins of the arm, where the cellular membrane must, of course, be very thin. That Harriet Ann Landon had severe pain immediately, or soon after the punctures were made in the arm, I inferred from the testimony of Mary Chittenden, corroborated by said Harriet Ann; and the whole train of symptoms stated to have followed, are such as we might have supposed would probably have taken place from such a cause, modified during the operation of the vaccine disease. The same symptoms, described by surgical writers, to have immediately followed the wounds of nerves, have originated from wounds of large nerves, and do not usually arise from wounds of the superficial nerves, though the latter may be followed by a long train of troublesome symptoms, as I have had occasion to know. Dorsey, in his Surgery, vol. i. p. 96, mentions the consequences of wounds of the nerves. Samuel Cooper, in his Dictionary of Surgery, (article, Bleeding,) makes remarks upon the consequences of wounds of the nerves in bleeding; and in the same article, remarks, on the authority of Mr. Abernethy, that where the nerves are wounded, the parts which they supply, will suffer pain. Mr. Abernethy remarks, as is observed by Mr. Cooper, that if the cutaneous nerve is wounded, the integuments of the forearm suffer pain. If the median nerve is wounded, the thumb and two next fingers suffer pain. There are many other remarks upon this subject, scattered in various surgical and medical periodical works, to which I cannot now refer.

Question by Dr. Humphrey. Do you believe that the opinion which you gave in testimony on the trial between Harriet Ann Landon and myself, that her lameness and pain were produced by a nerve being wounded below the skin, was, in any way, a mistaken opinion; or do you still believe a nerve below the skin must have been wounded?

Ans. I testified in said case,* after an examination of Harriet Ann Landon's arm, and information at the time, derived from Mary Chittenden, principally from my own experience in cases of that description. A question somewhat similar was asked of me in Court, to which I replied, that I had not known such symptoms arise in any case, unless a puncture had been made, extending through the true skin, or, that the parts, deeper than the true skin, had been injured by a contusion or some other cause. I did not state the possibility or impossibility of the production of such symptoms, arising from injury of any nerves, not beneath the true skin, neither can I now do it.

Question by Dr. Humphrey. Had you, at the time of giving your testimony in said case, heard any of the testimony introduced by me in regard to the lameness of said arm, or in regard to the manner of performing the operation? and also what said Harriet Ann had said about the punctures?

Ans. The testimony on the part of the plaintiff in the case, was first introduced, and of course, I testified before Dr. Humphrey's witnesses were examined. I do not, however, now recollect any particular testimony actually contradictory. Negative testimony, as to the lameness of the said Harriet Ann, was indeed, afterwards introduced, by persons, stated to have lived in the neighborhood. One or more of the witnesses, according to my best recollection, stated, that they had not known of her having been lame, or not to that degree that had been previously stated.

Quest. Would you say that you stated your opinion, regarding the injury of the nerve, from an *an ex parte* examination of said arm, and from representations

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* The case was first tried in the County Court, and then carried up to the Superior Court.

there made, together with the testimony of the plaintiff's witnesses, without having heard the testimony on the part of the defendant?

Ans. I gave my testimony, principally, before the defendant's witnesses were introduced. I was, however, requested to remain in Court, till the examination of witnesses should have been finished. I recollect having been several times called upon in the course of the trial, and of having answered questions proposed by the counsel on each side, and some questions by Dr. Humphrey. The minute particulars of all these transactions, I cannot now recollect. Further the deponent saith not. Signed. THOMAS HUBBARD, M. D. and Prof.

New Haven, August 22, 1832.

On the part of the defendant, testimony was produced, going to show that similar symptoms often, or occasionally followed vaccination, when performed in the usual place, and that they sometimes result from the most skilful vaccination, when no nerve is punctured.

Among others, the following depositions were offered, to this effect:

I, Olive Selleck, of lawful age, do depose and say, that about six years ago, I was vaccinated for the kine-pock, in the arm, in about the usual place, where I have seen others vaccinated. It was about two-thirds of the distance from the shoulder to the elbow. Immediately after the vaccination, a pain took me in the arm, and run from thence to the shoulder and neck, and continued on the next day and for several days after, and was very severe; and it has been ever since, when I have labored hard, more or less painful; and this pain in the arm did not terminate with the kine-pock, which went through its natural course. The operation was merely a scratch; the blood occasioned by the scratch was hardly perceptible. I am very confident that the pain in my shoulder and neck was occasioned by the vaccination, for it always appeared to be the same kind of pain; the scar occasioned by the vaccination was a very small one. I have not been prevented in consequence of the vaccination from doing my household business, or work, but when I worked hard, it gave me pain, and does to this day. (Signed) OLIVE SELLECK.

L. Perry, of Calebrook, in the County of Litchfield, of lawful age, testifies and says, that more than twenty years ago she was vaccinated for the kine-pock, which operated in the usual manner; and that about the 1st of February last, she vaccinated her own arm with matter taken from her son's arm, who then had the kine-pock; that in about five days the arm began to fester, and in about seven days was considerably swollen, she supposes, in consequence of taking cold. In about nine days the swelling came down, the arm was very painful, her hand and arm became numb to the elbow, and the pain ran into the shoulder and side of the neck, which was severe and occasioned a stiffness of the neck. The place on the arm where the incision was made, was extremely tender, and when touched, or suddenly strained, would cause severe pain. The arm and shoulder continued to be affected for a considerable time, as above stated, and it is yet weak, and the same painful feeling still affects her, to a considerable degree, when the place of incision is touched, or on a sudden strain. For three weeks past her arm appears to be slowly improving, but the darting and twitching pain, as before stated, still, to a considerable degree, continues. The deponent further says, that the sore on the arm healed in a few days, leaving a small scar, but the other painful feelings, as above stated, continued. (Signed) L. PERRY.

Such was the substance of the testimony, offered on both sides, in the course of this trial. Judge Daggett, however, in his charge to the Jury, was understood to lay down the following principle, as governing this, and other analogous cases: *In performing the operation of vaccination or inoculation, the physician is liable for all consequences if he neglects the usual precautions, or fails to insert the virus in that part of the*

arm USUALLY SELECTED *for the purpose; notwithstanding many other parts of the body might be proven to be equally proper, and even more suitable locations.* He illustrated this principle, by saying that a man would, in like manner, be liable for all consequences, in transporting public or private property, who departed from the usual route, though the one selected, should, on every account, prove to be the best one. This principle, illustrated by numerous examples, and enforced by all the eloquence of the learned and accomplished judge, sufficed to influence the minds of the jury in behalf of the plaintiff; and they accordingly brought in a verdict in her favor for 500 dollars and costs; the total expense amounting to about 1000 dollars. A more unrighteous verdict, I will venture to say, does not disgrace the record of any civil or criminal court, in this, or any other country.

REMARKS.—This case is a highly important one; for if the principle laid down by the Judge, and on which the verdict was given, be correct, and is to regulate similar or analagous cases, in future; then farewell to all improvements in medicine and surgery. If the physician or surgeon is bound to keep the old beaten path, and never deviate from modes of practice laid down by his predecessors, without exposing himself to the danger of being mulcted in heavy damages, where is the chance of improvement and discovery? Had such laws governed the decisions of English Courts, we should never have heard of the splendid surgical achievements of Hunter, Pott, the Coopers, Abernethy, Bell, and Liston. The practical effect of the principle, which decided the above case, is well illustrated by a fact which came to our knowledge during a recent visit to the town in which the physician, who was the defendant, resides. From that time to the present, we were informed, that he had not bled a patient, for fear that inflammation of the vein might follow, or a nerve be injured, or some other injury, real or imaginary, be the result, and thus subject him to another ruinous prosecution. Rather than take such a risk, he chooses to resort to the exclusive administration of internal remedies, even where blood-letting is clearly indicated. If such a principle be adopted, who does not see that the science of medicine must retrograde, and that the people themselves are the only sufferers, as on them rests the responsibility.

There is, moreover, not the slightest probability that a nerve of any consequence was wounded in the vaccination; and the results were no more than is often witnessed where severe inflammation follows from cold, the insertion of spurious matter, idiosyncrasy, &c., &c. The girl was of a highly nervous temperament and vivid imagination, as shown by the fact that when she *thought* of her arm, she always felt more or less pain in it. The evidence is conclusive, that she had the perfect use of it, as soon as the usual inflammation had subsided, and that she was not prevented, after the 12th day, from performing her usual work. On what ground, then, could a jury decide that the Doctor should pay her 500 dollars, and as much more in costs? Merely because the vaccination was performed about an inch below the usual place, and this was done, we are told, because the girl, from real or affected modesty, was unwilling the Doctor should raise her sleeve any higher!

In fine, from this case we learn how grateful the mass are for the gratuitous services of the physician. Here, a female of rather more than ordinary intelligence, is vaccinated free of charge, at an expense

to the town of about *four cents!* She is visited frequently afterwards, and the same attention is paid her, as though she had expected to reward the physician liberally for his services; and then the only recompence she makes, is to institute a legal prosecution, and follow it up, until one thousand dollars have been abstracted from the hard-earned fees of the son of Æsculapius!

New York, Sept. 10th, 1843.

ART. IV.—*The Epidemic Influenza, as it prevailed at Binghampton, New York, in the Spring and Summer of* 1843.—By N. S. DAVIS, M. D.

As facts constitute the basis of all knowledge, and as an almost infinite variety of facts and observations is necessary to elucidate the true causes and pathology of disease, we are induced to contribute our mite towards the investigation of one of the most serious and interesting diseases to which man is exposed, by making the following observations concerning the late epidemic Influenza.

Its first appearance in Binghampton, Broome County, New York, was about the 1st of May, and it continued to increase in extent until the middle of June. From this time, it gradually declined until the 1st of August, when it had apparently disappeared, and the usual bowel complaints of that season had fairly commenced. The prevalence of the epidemic was easily separated into three distinct periods; in each of which the disease presented some peculiar characteristics. In the first period, extending from the first of May to the middle of June, the disease was characterised by the following symptoms, viz: A sense of lassitude, with a dry soreness of the throat or fauces, coming on in the afternoon, and nearly disappearing in the morning, was often felt for some days; and this was suddenly followed by cold chills, severe pain in the head, back, and limbs, with a great sense of tightness across the epigastric region, and a very rapidly developed inflammation of the fauces, often extending to the upper portion of the larynx and the root of the tongue. The inflammation of the throat was accompanied by an erysipelatous redness, and so much swelling as in many cases to render degluitition extremely difficult.

The lymphatic glands of the neck often partook of the inflammation and swelling of the throat; and most of the early cases were accompanied by a bright red rash, which, however, generally disappeared in a very few days. The pulse in most cases was 85 or 90 per minute, full, though not hard; skin hot and dry; tongue covered with a moist yellow fur; thirst very moderate, and sometimes nausea and vomiting. In several of these early attacks, after the inflammation of the throat had continued from three to five days, a fully formed erysipelas appeared, generally on the lips or cheeks, whence it extended more or less rapidly, until it covered the entire face and scalp; and in one fatal case, which, however, I did not see, it was said to have extended, not only over the whole head, but also down the neck, shoulders, and back, as far as the waist. These cases were accompanied by a high fever, a thickly coat-

ed, yellow tongue, and much swelling of the inflamed parts. In one severe case, which came under my care, the face was so swollen as entirely to prevent the opening of either eye; and much *delirium* prevailed for three or four days. It was in this form that the epidemic proved most severe and dangerous. In two or three instances, it proved fatal; but as neither of these came under my immediate observation, I cannot give them in detail.

The second period to which we have referred, extended from the middle of June to about the middle of July. During this time the disease presented the same general characteristics, but with very little or no inflammation of the throat, and with no erysipelas; while there was added in their stead, considerable soreness of the lungs, with a very severe harassing cough, and more or less expectoration of, at first, a thick viscid or frothy mucus, which afterward became yellow and sometimes copious. During the third and last period, extending from the middle of July to the first of August, it differed from the second only in the more decided marks of irritation in the mucous membranes of the stomach and bowels, and less in the bronchia and lungs. At the commencement of the attacks during the whole course of the disease, there seemed to be much torpor or inactivity of the liver, as shown by the appearance of less than the usual quantity of bile in the evacuations, and the frequent nausea and sense of tightness and weight across the epigastric and right hypochondriac regions. The duration of the attacks was from three days to three weeks.

Pathology.—To ascertain the nature and true seat of disease is the main point towards which all our investigations should tend. Was the epidemic of the present season inflammatory? and if so, what were the tissues primarily affected? Most writers, we believe, have regarded the disease as an inflammation, or at least, a high degree of irritation, affecting primarily the mucous membrane lining the respiratory passages, and sometimes extending through the œsophagus and stomach. But our own observations have led us to a somewhat different, and very possibly to an erroneous conclusion. When we remember that bleeding, even in the very commencement of an attack, is badly borne, and that the blood, when drawn, presents little or no inflammatory appearance; and that the pulse is generally neither very full nor hard, nor the thirst urgent, and that those remedies which generally act most directly on the respiratory organs, such as antimony and various kinds of expectorants, have very little influence over the progress of the disease; all this, I say, leads us to doubt the correctness of the above opinions. Indeed, we are inclined to the belief that the cause of the disease, whatever it may be, affects primarily the blood in such a way as to derange the secretions, and especially that from the liver, while the affection of the throat and respiratory organs, is an effect, and not the cause, of the morbid secretions. And hence the disease is primarily functional in its character; and the cause of that functional derangement acting throughout the whole mass of circulating blood, also readily explains the early depression of the nervous or vital energies. That inflammation of the fauces and bronchial tubes is early developed in most cases of the Influenza is very true; and so has severe erysipelas of the face and scalp accompanied a number of cases, which came under my observation; and the same fact we believe has been noticed in former seasons, when this disease has prevailed. Yet no one has ventured to

call either the erysipelas or the exanthematous affection which often accompanies the Influenza, the primary disease. Neither do we believe that the anginosa or bronchial affections, which are by no means present in every case, constitute the primary disease. Indeed, I well recollect one family in which four persons were confined with the epidemic at the same time. The premonitory symptoms in all were the same as we have already described; but, on the second or third day, two of them were found with a fully-formed erysipelas on the face, which spread over the whole head and became quite serious; while the most prominent local affection in the third, was in the respiratory passages; and the fourth had neither erysipelas, eruption, or angina, but labored under an intense pain in the head and back, great tightness across the epigastrium, sometimes nausea, with much derangement of the biliary secretions. Out of 150 or 200 cases of this disease, I have not seen one that was not accompanied by more or less biliary derangement, as manifested both by the symptoms and the character of the evacuations. These facts, together with the effects of certain therapuetic agents, to be referred to hereafter, have led me to that view of the pathology of this disease which has been already indicated.

Causes of the Epidemic of the present season.—As the able editor of the "New York Journal of Medicine" has given in the first number of that excellent periodical, the various theories concerning the origin and causes of epidemic Influenzas, as advocated by different medical writers, we shall at present confine ourselves to two only, and their applicability to the epidemic of the present season. We believe that most professional men who have given attention to this subject, are divided between two theories, the one attributing the origin and prevalence of the disease to a specific virus, capable of wide and exceedingly rapid diffusion by means of atmospheric currents or otherwise; and the other to atmospheric changes alone. The advocates of a specific *virus*, contend that the disease, having occurred in almost every country, and in every variety of season and climate, cannot, therefore, depend upon atmospheric vicissitudes merely. But if we suppose it produced by some peculiar virus, the next inquiry is concerning the nature of such virus, the laws by which it is governed, and the circumstances under which it is generated. It cannot be of the nature of contagion which is generated in a system laboring under its influence, and hence propagated from one individual to another; for, so far as our experience goes, it is strongly against such an idea. We have seen repeatedly one or two in a house attacked with it, while the rest were exempt; and on the other hand, where whole families have been afflicted, the one who had been the least exposed to others was attacked first. And again, it is known to prevail severely in some locations, while in others, only at a few miles distant, it is almost or altogether unknown. But if the supposed virus is not generated in the system while laboring under its influence, it must be owing either to some change in the constitution of the atmosphere itself, or be like marsh miasma, to the combined influences of soil and temperature. Doubtless if the prevalence of this disease during the past season could have been anticipated, and a series of questions addressed to the profession, which should have directed their attention to some of these points, and served as a text or guide to their observations, much valuable information would have been obtained which is now lost merely for want of attention.

Whether the disease is caused by a "*materiel virus*," or by atmospheric changes, one thing, I think, must be conceded, *i. e.*, that the season or *weather*, if we may so speak, has an important influence over its progress and character; and accurate observations would have detected something peculiar in each season of its prevalence. But we must not only make minute observations concerning the temperature, moisture, and electricity of the atmosphere, during the prevalence of the disease, but for some months preceding its appearance. It is doubtless remembered by all, that the winter and spring immediately preceding the appearance of the epidemic of the present season were marked by some things peculiar. Thus, the month of January was remarkably warm, and almost wholly without snow; while the succeeding February and March were directly the reverse; and even up to the first few days of April, the ground was still covered with a heavy coat of snow, and the atmosphere was very cold. From this time to the first of May, the weather was wet, cold, and unpleasant, and even at that late period, (1st of May) some remnants of the deep snow could be seen in some of the fields of this county. From this time to the first of June, the weather was pretty uniformly warm and dry, and it was during these warm and dry days, following the previous unusual cold, that the epidemic first made its appearance in this place. During the first days of June, a sudden change to cold and a severe firost were experienced, which destroyed nearly all the fruit in this vicinity. This was followed again by the opposite extreme to such an extent that, near the last of June, the mercury rose one day, at 2 o'clock, P. M., in the shade, to 102°, which is 4° warmer than any day during the previous year, as indicated by the same thermometer. The relaxation and torpor of the system, the sense of lassitude and indisposition felt by every one when exposed to a warm atmosphere, immediately following an unusually cold one; and its influence over the urinary and biliary secretions, is well known to every observer. But whether the disease under consideration is produced by some specific virus, some subtle agent, generated in the atmosphere by some peculiarity of season, or whether it is the direct effect of a combination of circumstances relating to atmospheric changes, such as those to which we have referred as occurring during the past season, it is probably, in the present state of our knowledge, impossible to determine.

We must confess, however, that we are unable to appreciate the force of the remarks of Dr. Holland, that the "identity of the disease at different periods of time, and in distant places, during the course of the same epidemic," can only be explained on the supposition of a material virus as its cause. For we are not aware that time or distance destroys the identity of any disease, and we believe an accurate description of a *pleurisy* in the days of Hippocrates would be equally characteristic of the same disease at the present day; and the detail of the characteristic symptoms of a common *catarrh* in New York, would apply equally well to the same affection in the *Mediterranean sea*. We believe the laws of nature are invariable; and that the same combination of circumstances in relation to the temperature, moisture, electricity, &c. &c., of the atmosphere, occurring at periods however distant, will, as surely, be productive of the same results or diseases, as will the recurrence at different times and places of the same material virus.

Treatment.—The treatment which every physician will pursue will depend very much on the views which he adopts in regard to the nature

and cause of the disease. If we follow Dr. Holland, Dr. Forry, and others, who consider the disease as "presenting a definite course of morbid actions, the result of a specific virus, for which we know neither a specific antidote, nor, unlike the case of small-pox, a specific prophylactic"—and that "we can do no more than direct our efforts to the mitigation of such symptoms as may be in excess;" we shall undoubtedly, like them, seek to *palliate* rather than attempt to *cure* the disease. On the contrary, if we view the disease, whatever may be its cause, as one in which the liver is primarily affected in such a manner as to induce a torpor of that organ, and consequently a retention in the blood of some of those matters which ought to have been separated, we shall be led directly to a plan of treatment which we believe has been found eminently successful in the hands of many practitioners; and those, too, of the most diverse theories. This treatment consists in the exhibition of such remedies as will excite a free secretion from the liver, and a thorough, though not harsh evacuation of the stomach and bowels. For this purpose we know of no medicine so effectual as *calomel* and ipecac. in a dose sufficient to produce at first one or two free vomitings, and afterwards, aided by a laxative, a free operation of the bowels. We know of no instance during the past season, in which this remedy failed to bring away copious dark, *bilious* evacuation, followed by a speedy relief of all the severe symptoms. We at first attempted to treat the disease like other anginose affections, with antimony, diaphoretics, expectorants, &c., but with very indifferent success. We also saw it treated by others with stimulants, both of the *pepper* and *alcoholic* varieties; but with still less benefit. And it was not until we had watched the character of the evacuations, and observed that almost, if not quite every patient, who was attacked with any degree of severity, *vomited* freely, either spontaneously or otherwise, before any considerable relief was obtained, that we were led to adopt the plan of treatment which we have indicated. It is by no means essential that we give the particular combination mentioned, but we may accomplish the same object, though I believe less speedily, by giving an emetic of ipecac., and following it by mercurial purgatives, &c.

Bleeding and antimony are too debilitating in their effects to be admissible to any considerable extent in this disease. Indeed, I believe the only fatal cases which occurred within the bounds of my acquaintance were *bled* freely. In only three cases which came under my care, was bleeding resorted to, and though they all recovered, in only one did it appear to produce any benefit. If, after free evacuations, and a subsidence of the febrile symptoms, a severe, harassing cough remains, anodynes will be found of much service. We are well aware that this disease sometimes attacks an individual with considerable severity, and disappears again in two or three days without any remedial treatment whatever, and hence it has been said by high authority, that because the disease yields soon after the exhibition of certain remedies, there is no certainty that it was the treatment which produced the effect. We admit that the apparent success of any particular treatment in two or three cases *only*, would be very unsatisfactory. But when we see the same effects from the exhibition of the same remedies in a hundred different cases, embracing every variety of attack, from the mildest to the most *severe*, we must yield our confidence to their efficacy; or else doubt the curative effects of all remedies in all diseases. For we believe there

are very few observing physicians but what have seen nearly all the diseases in the whole catalogue of human suffering, occasionally, nay, often, get well without anything but the restorative efforts of nature. But they would not, therefore, contend that remedies, other than palliatives, were useless.

ART. V.—*A Lecture on the Improvement of Medical Education in the United States; introductory to a course of Lectures in the University of New York for the session of* 1842-3. By MARTYN PAINE, M. D., M. V. H. P., Professor of the Institutes of Medicine and Materia Medica, in the University.

GENTLEMEN,

"There is no reputation for genius," says Quintilian, "to be gained by writing on things which, however necessary, have little splendor or show. The height of a building attracts the eye, but the foundations lie without regard. Yet, since there is not any way to the top of science, but from the lowest parts, I shall think nothing unconnected with the art of oratory, which he that wants cannot be an orator."

A disregard of the important principle inculcated by Quintilian in the extract which I have just made, and erecting edifices upon crude and inharmonious materials, or without even the shadow of foundation, have been the prolific causes of the present vacillation in medicine,—of the innovations which are made upon its most solid principles,—of the heresies which come as substitutes from the laboratory of the chemist,—of the "uncertainty" with which it is said to be cursed by nature.

The "imperfection of medicine" has become the watchword of a thousand ambitious minds; and there still lingers on our ear the bold and inconsistent declaration that the Science "is now in its infancy," yet susceptible of "mathematical certainty."* But, worse than all, the infant chemistry, which came into existence ages after medicine had nearly reached the maturity of manhood, having suddenly assumed the proportions and the strength of Hercules amongst his fellow gods, vociferates its pretensions as the legitimate parent of medicine, has driven cultivators from the field of organic nature, and its claim of paternity, which was once regarded as the most farcical stride of ambition, is now conceded to the more gigantic stature and overbearing deportment of this young scion of knowledge.

It has been well said, that "the opinions prevalent in one age, as truths above the reach of controversy, are confuted and rejected in another, and rise again to reception in remoter times. Thus the human mind is kept in motion without progress. Thus, sometimes, truth and error, and sometimes contrarieties of error, take each other's place by reciprocal invasion."† But, most of all, let me admonish you against the illusion which professes to have attained by a few simple observa-

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* See my Medical and Physiological Commentaries, Vol. ii., pp. 679—815.
† Johnson's Preface to Shakspeare.

tions, or through the chimeras of hypothesis, what it avows to have been the fruitless work of the most profound philosophers, and the closest observers of nature, for nearly three thousand years.

Let me not, however, be misunderstood. It is in no respect my design to undervalue the science of chemistry. The position which I have hitherto taken is defensive only. It is against chemistry when hunting for laurels in the field of physiology, of pathology, and of therapeutics. Thus far chemistry is a selfish aggressor, and may not complain that its encroachments are repelled without compromise, and without sympathy. In its appropriate walks none have greater delight than myself. They are decorated with gems of rich magnificence, of the rarest value, fascinating to the eye, luxurious to the imagination, fertilizing to the mind. Chemistry abounds, also, with sublimities, and overflows with useful inventions and discoveries. The more profoundly, also, we become imbued with a knowledge of the institutions of chemistry, the more shall we revolt from those schemes which engraft upon organic life the laws of a department of nature that are forever in conflict with it, and which ultimately lay waste the whole fabric of organization, and extinguish its ruling and creative principle,—till, at last, they shall reign triumphant over an universal ruin, and extend more and more widely the gulf which now separates organic life from the inorganic world. But, whilst there yet lingers on this or another globe a solitary being endowed with the principle of life, that being may hurl defiance at all the ordinary agents that may have contributed to the waste by which it is surrounded. The globe we inhabit, the whole heavenly system, are but designed for the abode and the uses of life. Those are but gross and subsidiary; this, like its author, creative of organization, and associated with an immortal spirit whose capacities alone elevate the temple of its birth to proportions corresponding to its own divine nature.

I would, therefore, urge you to the diligent culture of chemical science, as a boundless source of intellectual improvement, for indispensable habits of critical inquiry and exact analysis, to enlarge the high prerogatives of our art, and to enable you to discern, as with the light of the sun, the utter estrangement of the laws which preside over the two great kingdoms of nature. And, in the language of Burke, let us never forget that "WHEN EDUCATION TAKES IN ERROR AS A PART OF ITS SYSTEM, THERE IS NO DOUBT BUT THAT IT WILL OPERATE WITH ABUNDANT ENERGY, AND TO AN EXTENT INDEFINITE."

It is only, therefore, to the application of chemistry to the lofty problems of organic life in its healthy and morbid aspects, and to the imbecility which would receive from the chemist—from him who lives in ignorance of organic nature, and is only concerned about the elements of matter—a system of philosophy applicable to living beings, and as that philosophy may be modified by disease, that I would offer an objection. "Let a man," says Locke, in his work on the Human Understanding, "be given up to the contemplation of one sort of knowledge, and that will become every thing. The mind will take such a tincture from a familiarity with that object, that every thing else, how remote soever, will be brought under the same view. A metaphysician will bring ploughing and gardening immediately to abstract notions;—the history of nature will signify nothing to him. A chemist, on the contrary, shall reduce divinity to the maxims of his laboratory, explain

morality by *sal*, *sulphur*, and *mercury*, and allegorize the Scripture itself, and the sacred mysteries thereof, into the philosopher's stone."

That this is no hyperbole, even at our day, take a passage in proof from Liebig's Organic Chemistry applied to Physiology and Pathology —a work just from the press.

"Physiology," he says, "has sufficiently decisive grounds for the opinion, that every motion, every manifestation of force, is the result of a transformation of the structure, or of its substance; that every conception, every mental affection, is followed by changes in the chemical nature of the secreted fluids; that every thought, every sensation, is accompanied by a change in the composition of the substance of the brain." (P. 8.)

"Chemistry applied to Physiology and Pathology," as it is absurdly called, is the infatuating genius that lays wait your path, and may beguile you into the worst and inextricable errors. It presents you a system of insinuating simplicity—promises you an exemption from intellectual toil—divests pathology and therapeutics, as well as physiology, of every intelligible principle—substitutes itself for all medical knowledge—overthrows every other department in the science—corrupting even its own principles—and renders the practice of medicine "as mechanical as the art of the shoemaker." It is this interference of the laboratory which has shaken so extensively the foundations of medicine, and which so cruelly debases the science. It is said that "there is a sort of gloss upon ingenious falsehoods, that dazzles the imagination, but which neither belongs to, nor becomes, the sober aspect of truth."

The various results of this unnatural enterprise have been intensely interesting to myself, and have engaged no little of my time, as well as my pen. The late publications of Liebig, the acknowledged chief in organic chemistry, will do much to awaken physiologists from their lethargy, or dispel the illusion which has seized upon them. From this time, organic chemistry will be on the wane. It has received a most fatal blow from its greatest champion. I may also say that his "Chemistry applied to Physiology and Pathology," has called up an efficient advocate of truth in the last number of the North American Review. The reviewer and myself are side by side in almost every opinion upon the important questions before us. The difference between us is, he states conclusions only, whilst I had argued the whole, and corroborated each one by a multitude of facts. This I had done even in anticipation of the present crisis. I commend this reviewer to your attention. His article should be read by every physician in the land, especially for the sake of the summary extracts which are presented. The citations alone from Liebig's work will turn every mind from the phantom which has hitherto beguiled the unreflecting part of our profession. You may learn their universal import from a single remark of the reviewer, as well as from my preceding quotation from the author.

"We have purposely given," says the reviewer, "our author's theory of disease and remedies almost exclusively in the author's words, lest any analysis of it should have seemed to our medical readers distorted or exaggerated. We do not think so unfavorably of the understanding of any reader, medical or non-medical, as to believe that there is one among them all who will require a word of comment to convince him

how utterly unfounded and extravagant it is. If there be one such, he is past our remedy." "Such," the reviewer goes on, "is the splendid production upon which the British Association felicitates itself, which a Professor of King's College counts it such a glory to have introduced into the British world, and in regard to which there is so violent a contest for the honor of assisting at its birth on this side of the water." (October, 1842, p. 498.)

I say, therefore, that DRY LAND APPEARS, though it be yet far in the distance. It will give animation or courage to others who have hitherto looked on with *indifference*, or in *dismay*, or in *despair;* and we may even expect to be "ENCUMBERED WITH HELP WHEN THE SHORE SHALL HAVE BEEN REACHED IN SAFETY."

But it is not my present purpose to dwell on this extraordinary convulsion, or on its disastrous consequences to the welfare of man. They exist,—are sustained by a powerful array of numbers, and will be pushed till *fruitless ambition* shall take its natural course through other avenues to fame.

May it not be possible, however, to paralyze the operation of error, and bring into general diffusion the light of truth, ere the former shall have exhausted itself, or may scent a new game, and start on another chase? You say, perhaps, that the remedy for error is its exposure through the press; and in part, you say truly. But this is only a small part of the requirements of truth when besieged by its unrelenting adversary. What, indeed, would avail the clearest demonstrations of the most profound philosopher, did he not have willing and enlightened readers, or an attentive and cultivated audience? And medicine, as you will ultimately know, is the most difficult of all the sciences.

Here, then, is the great foundation upon which the superstructure can be alone erected. Knowledge must be carried through the wide domain of our profession. Its *elements*, however, can never be sufficient for the exigencies of the healing art,—can never resist that plausible simplicity which throws its fascinations around the chemical and other physical doctrines of life and disease, and will forever shrink from the stupendous and intricate philosophy which constitutes the true science of medicine. You must, therefore, aspire at the goal of medical philosophers, before you may comprehend or enjoy the philosophy of medicine. You must have willing minds, and steady purpose, before you will study the elaborate writings of its sages, and therefore, before those efforts of genius can bear with any practical effect upon the dogmas of ambition, or the errors of ignorance and superstition. "Books," says Bacon, "can never teach the use of books;" and I may add that in proportion as they are concerned about difficult principles, so must the practical habits of life, and experimental observation through the wide domain of Nature, be brought to their interpretation, and an exposition of their uses. The mind must gather instruction through the same channels from which books of instruction have been derived, before we may comprehend the nature of the latter. Then, shall you go on, with books and experimental observation hand in hand, to provide yourselves with a work of your own creation that shall surpass the most elaborate writings of any sage of our profession. For though, as said by Fenelon, "we admire with reason the invention of books, in which are presented the histories of so many facts, and which are the depositories of so many thoughts, what comparison is there between the most delightful book,

and the brain of a learned man? There can be no doubt that this brain is a far more precious collection, and a much more beautiful invention than any book. In this little reservoir you can find, at any moment, every image that you desire. You call them, they come. You send them away, they hide themselves, we know not where, and others appear in their place. We open and shut our imaginations as we open and shut a book; as one may say, we turn over its leaves, we pass suddenly from one end of it to the other. We have even tablets in the memory, to indicate the places where certain images may be found. But, these innumerable characters, which the mind can read so rapidly, leave no traces on the brain. If you examine it, you see only a soft substance, a sort of cluster of fine and tender threads, and mostly water." If you analyze it with fire and acids, you get nothing but the mere elements of matter. The PRESIDING GENIUS evades the grossness of sense, alike in the hands of the physiologist, the anatomist, the chemist, and the medical philosopher.

Such is the book of books; and would you make the highest attainments in medicine, it should be a compound of many written books, and replete with inscriptions by the hand of Nature. It may not, however, be easy to indicate the amount of knowledge or of intellectual labor which is necessary to form a medical philosopher. This will depend much upon natural endowments, upon opportunities of observing nature, and the mode in which those opportunities are employed.

You are inducted over the threshold of medicine by the standard elementary authors; and you are farther initiated by lectures at our public institutions. But, at the very outset, you meet with error as well as with truth; and it is only by systematic perseverance, by rising from elementary authors to the lecture-rooms of medical teachers, where principles are variously examined, and ascending to the elaborate writings of the great masters of our art, and then by applying to the whole the test of your own observations of nature, that you can separate what is true from the false, and acquire that proficiency in medicine which ensures the greatest practical success.

These propositions are too plain to be controverted; and it now only remains to ascertain whether there be any conditions of society which modify the requirements that are enjoined upon physicians by the highest and holiest dictates of the healing art?

Wherever man exists in a state of society, *there* will always be the professional ministers of relief to his suffering and disease. This is even true of the wandering Arab, and of the most abject and superstitious of our race. To them, nothing accrues but the havoc of ill-directed means, or, at best, the hope that is inspired by incantations and charms. These are the lobelia empirics of our own land; and whilst we regard with sorrow the unhappy destinies of our benighted brethren of the woods, or of the hovel, the victims of an obstinate delusion, where knowledge and christianity prevail, scarcely deserve a passing sympathy.

Since, therefore, practitioners of the healing art, whether for good or for evil, must abound in all assemblages of men, it is obvious that provisions should be made for the diffusion of medical knowledge as far commensurate with the vastness and the difficulties of the science, and with its relations to the human welfare, as the circumstances of each society will admit. There should be no limit to those require-

ments which humanity enjoins, and which education supplies, unless imposed by the common exigencies of society; and these are alone of a pecuniary nature. Where wealth abounds, as in the various states of Europe, medical education should be carried to the very stretch of the principles which I have suggested; and it is a scandal to their society that imperfections are tolerated in any shape. The diffusion of wealth should insure to every country in Europe an overflowing profession conversant with every useful department of science, and accomplished in the philosophy of medicine.

This, I believe, is, to a large extent, an undoubted proposition—so undoubted that there are not wanting many who would make this triumph of wealth a standard of requirements in our young and comparatively necessitous republic. Here, too, our institutions go for the equality of man, and legislation proceeds upon this conciliatory, however unfounded, principle. Whilst, therefore, medical education may be encouraged by provisions that do not conflict with the fundamental declaration of equality of rights and intellect, there will ever remain, whilst the doctrine remains, a passive, but licentious indulgence of the lowest quackery. Such will not only be the inevitable result of a principle adopted from policy, and which did better cause than the artillery of war, but the whole people being the arbiters of principle as well as of law, the majority will be slow to relinquish a concession so flattering to pride and so inflammatory to ambition—and, as you know, there will still be multitudes who will ride into power upon these infirmities of our nature, and who, when once in power, must sustain the fiction which gave them elevation. However, therefore, what is good in our republican institutions may surpass all other systems of social compact, we may make up our minds that medical quackery will receive at least the indulgence of our legislators.

This fundamental evil separates us still more widely from European states than the wealth and the leisure which give them an ascendency in literature and arts; and whilst, therefore, the latter may hold replenished the profession of medicine in its highest advances, their legislators, without fear and with a good conscience, may extinguish a pestilence which is more desolating to the human race than that "which walketh in darkness," or all the ravages of war.

Thus, then, we destroy the parallel which has been attempted between our own and European states, and show it the merest fiction of the visionary mind. Exact from our physicians the intellectual culture, and rear in this land the high standard of medical acquirements, which are so noble and fascinating in some of the schools of Europe, and quackery would reign almost universal from one end of the continent to the other. Is not the whole multitude, whether rich or poor, pressing forward either for greater wealth, or for the pittance of their daily bread? Nay, more, do not all our medical colleges hold out the temptation of moderate fees, and give, in their annual announcements, a conspicuous place *to the humble charges for the necessaries of life?** But

* In the annual announcement for 1842, of one of the principal medical schools in America, and associated with one of the oldest universities, and located in a populous town, after a statement of the average price of board, it is added that there exist "abundant facilities for those who may wish to board themselves."

what are these, compared with the expenses attendant on the prolonged and higher grades of academic and medical learning in some of the European states? And who does not see the inconsistency that would hold in one hand professions of cheapness to allure the student through our present system of medical discipline, and threaten with the other augmented fees and an impossible exaction upon time? The same principle, too, runs through all our primary schools, our academic, collegiate, legal, clerical, and political institutions. Cheapness of education, and a corresponding adaptation of time, are found indispensable to the general condition of society.

The question is, therefore, settled on the immutable principles of truth—of a truth which is founded in the exigencies of our country. We have not the means, we have not the leisure, to follow the standard of European wealth; nor can we control our destinies by European legislation. He, who, in America, aims at the profession of medicine, with honors and dignities as inviting as in the aristocracies of Europe, but less seductive than the allurements of wealth, comes from a class where the blandishments of the latter have no existence. He has worked his way from elementary schools through the higher departments of academic learning, under the frigid discipline of poverty, and he enters our halls of medical education with little else than the hope that his career may not be arrested by insane exactions, now, for the first time, borrowed from the overgrown wealth of Europe, and her old and rich institutions. Looking back upon my own fortunes in life—looking around upon what I every where witness, I sympathise, most deeply sympathise, with this class of the American family.

Raise, therefore, beyond a certain limited poise, our standard of absolute requirements, and I repeat it, with no fear of contradiction, we shall turn from our medical schools most of their aspirants into more humble channels, or into the walks of empiricism. The exigencies of American physicians demand an early application to the business of life. If we would cultivate the field of medicine, we must look for an early harvest, or, my word for it, it will soon be overrun with weeds. But these necessities by no means preclude the highest advancement in medical attainments. When the harvest begins, then is the time for the most salutary stimulus of ambition; and whoever yields to its spur, will find abundant opportunity to carry his knowledge to the highest stretch of his intellectual constitution. He has but to remember that professional rank can only be acquired by various learning; and, in the language of Johnson, he "who proposes to grow eminent by learning, should carry in his mind at once the difficulty of excellence and the force of industry; and never forget that fame is not conferred but as the recompense of labor; and that labor, vigorously continued, has not often failed of its reward." * These indisputable precepts compel the aspirant at medical renown, or even at the highest practical success, to limit his enjoyments to a social intercourse with his patients, to a participation in the general enterprises of society, to the study of nature, and lastly, to all the literature which may elevate the mind. These should be his recreations as well as his employment; and as knowledge

*Rambler, Vol. I.

flows in, an inexhaustible fountain of happiness is acquired, whose very spray clouds the gaieties of life, and renders the pleasures of the intellectual man as circumscribed as the voluptuousness of wealth is discursive in its search after sensual gratifications. One is a steady, refined, and unalloyed enjoyment; the other gross, discontented, and forever sated with every thing but the new. "Philosophical happiness," says Burke, "is to want little; vulgar happiness is to want much, and to enjoy much."

If we look for a *defect* in the intellectual culture of the graduates of our medical schools, we shall find a pervading one in the neglect of the opportunities which perpetually surround them,—in the apathy which they evince towards the literature of the profession. This, I am sensible, grows in part out of those exigencies which limit the academic and professional requisites that introduce the student to the honors of the profession, and which, in late years, have made greater demands upon his habits of economy, and have tended yet farther to cool the ardor of ambition. A sickly fashion has grown up of deriding elaborate works on science. This is especially true of the science of medicine, which, more than any other, demands critical and minute investigation. It is the fashion of the age to conceal or reject the past, in all its transcendent lustre. There is a general demand for the *multum in parvo*, for the latest fashion in the fewest words,—and the less of nature it embraces, the more does it receive the applause of the multitude. I will not say that we must go back to the ancients for the true principles of medicine, though we shall find the best of our own embodied in their writings. But I will say that they had better habits of observing nature than ourselves. These, we should study, and learn from them the true sources of our best conceptions of nature. The Greek and Roman philosophers surpass all succeeding generations in many of the most elevated occupations of mind. The best of our poets, sculptors, historians, orators, are only humble imitators of their excellence. They have not a rival, not an equal in our own times. And how truly are the principles of medicine, like those of the fine-arts, engraven in bold relief upon the institutions of nature. If there be an apparent mystery, it is equally common to the whole; but it vanishes before the light of genius. The phenomena of disease were peculiarly attractive to such an order of mind; and springing then, as now, from the great laws of organization, the latter were grasped, as were the fundamental principles of taste, poetry, &c. The master-spirits of antiquity observed nature correctly, and drew their inductions from this only source of correct knowledge. They must therefore remain impregnable against all the adversities of time. (See my Med. and Physiol. Com. vol. 1, p. 333, vol. 2, p. 813.) A great work is to be done by the physician, and in proportion as deficiencies abound when he assumes the high responsibilities of his profession, it becomes him to investigate well every step of his experience, to employ his hours, or his moments of leisure, by day and by night, in garnering the experience which is supplied by the literature of the profession; and by rendering experimental observation and theoretical principles mutually subservient, he shall come, by degrees, to the attainment of distinguished worth, and the applause of mankind. It is true, as has been well said, that "men have sometimes appeared of such transcendent abilities, that their slightest and most cursory performances exceed all that labor or tudy can enable meaner intellects to compose; as there are regions of

which the spontaneous products cannot be equalled, in other soils, by care and culture. But, it is no less dangerous for any man to place himself in this rank of understanding, and fancy he is born to be illustrious without labor, than to omit the care of husbandry, and expect from his ground the blossoms of Arabia."* "Every man," says the great moralist, "is obliged, by the Supreme Master of the Universe, to improve all the opportunities of good which are afforded him, and to keep in continual activity such as are bestowed upon him. But he has no reason to repine, though his abilities are small and his opportunities few. He that has improved the virtue or advanced the happiness of one fellow-creature, he that has ascertained a single moral proposition, or added one useful experiment to natural knowledge, may be contented with his own performance; and, with respect to mortals like himself, may demand, like Augustus, to be dismissed, at his departure, with applause"†

This is just in morals, as it is benevolent in principle, and where opportunities are limited, the doctrine should apply in its ample liberality. But it can scarcely serve as a mantle of charity where opportunities abound, as in the practice of medicine; though we may rest assured that the same great philosopher was universally right in affirming that "he who waits for an opportunity to do much at once, may breathe out his life in idle wishes, and regret, in the last hour, his useless intentions and barren zeal."‡

I have a few remaining words as to the nature of the admirable system of collegiate medical education which has spread over our land. It has grown out of the exigencies and enterprise of a young country and the republican character of its laws. It is adapted to the various conditions of society, and provides, in its lowest degrees, a class of physicians who are capable of yielding great benefits to the human family.

The medical students of the United States, who aspire at the honors of the profession, may be divided into three classes. One of these resort to the country schools, where lectures and board are low, though scarcely lower than in our cities. The advantage gained, therefore, consists in a more limited term of instruction, which diminishes expense, and often enables the graduate to enter sooner upon those practical labors which call loudly upon his attention. He goes forth, however, from these minor institutions with a fund of knowledge of immediate and salutary application, and which is capable of growing into a mine of inestimable value.

A second class are blessed with more ample means; and after husbanding their resources at one session of a country institution, they seek, at the next, the higher accomplishments which are to be found in the cities.

Lastly, come the aristocrats of our profession; made so through the difference of a few dollars, by those noble attainments which that little disparity in fortune qualifies them to bestow upon themselves. It is the aristocracy of mind and education—the only aristocracy which can advance, one iota, the dignity and the worth of man.

Here, then, we have a system of medical education remarkably adapted to the exigencies of our country; and for the very reason that it has sprung from those exigencies, under the stimulus of a general dif-

* Johnson's Rambler. † Ibid, Idler. ‡ Idler.

fusion of knowledge, and the indomitable enterprise and ambition of our countrymen. Instead of deficiencies, it is only astonishing that a nation, just rising from its infancy, should have carried the general diffusion of knowledge far beyond any of the most enlightened states of Europe, should have reared more temples for the higher branches of education than can be found in all Europe together, should have its twenty-eight medical colleges, in most of which there are professors who do honor to the departments over which they preside. Wherever we turn ourselves, we are met by examples of aspirations at knowledge, whether private or public, which, however familiar, are so unusual in contrast with the infancy of nations,—aye, with the adolescence of the oldest communities,—that we often fail to regard the phenomenon as a reality of human enterprise. It meets us, indeed, in the forest as in places of greater wealth and refinement; and, even there, we behold institutions for the diffusion of medical knowledge commanding the attention of legislatures, and giving origin and impulse to various movements in science. Where, for example, was Missouri yesterday, and where is she to-day? "That State, which, within the memory of young men," says the able editor of the Boston Medical and Surgical Journal, (Aug. 3rd, 1842,) "was in the possession of savages, now vies with her sister States in the arts and refinements of modern society. Amongst the evidences of her onward progress, is the organization of a State Medical Society. The legislature has thus given a splendid exhibition of the wisdom of its councils, in chartering an institution which contemplates the preservation of the public health, almost in the commencement of its own existence;" the society having been incorporated in 1837. But, what is yet more to our purpose, the State of Missouri, in the year 1829, while yet a forest, where the white man mingled with the red, opened a university with a medical department of such commanding attitude that we can only look for its parallel to our own country.

Nor are there any institutions more important than the *country* medical schools, since these are adapted to the means of a large class of students, who, without them, would either make but humble attainments, or seek other channels for the business of life; whilst, as I have shown, the places of the latter would be supplied with jugglers and empirics. Nay, more, a large proportion of our second class, such as divide themselves between town and country, wanting the facilities of attending, at first, a minor course of lectures, and not having the ambition which is there inspired, would never seek the higher advantages of our cities; but, in hopeless despair, would turn themselves to some other employment, or be compelled to dispense with the important advantages of public lectures.

The more, therefore, we consider this subject, the more we shall see the calamitous extent to which medical education would be reduced, or gross empiricism entailed upon society, were it not for our country medical schools; and it therefore follows, as a necessary axiom, that the standard of requirements cannot be increased in those institutions without equally defeating their objects.

It is therefore, also, as palpable as demonstration can make it, that our present system of collegiate medical instruction should remain without essential change in its *absolute requirements*, till such change can be sustained by a more general increase and diffusion of property, and

by that diminished zeal for wealth which only follows its accumulation in the hands of many.

What is apparently lost in America by the more limited demands upon medical education than are exacted by a few European seminaries, is made up by the greater multiplication of our medical and academic institutions, by their general tone, and by the more general diffusion of medical knowledge. Nor is it a small part of our surrounding advantages, which go to the formation of character, of judgment, and practical habits, at the very outset of professional life, that our pecuniary wants turn us, almost from the cradle, to thoughtful habits of economy, and into the ways of industry. We thus, also, become early familiar with man in all his aspects; and with characters formed for decision by participating in the events of society, and early accustomed to mark the varieties of the moral constitution, we are better qualified, than they who spring from the nursery of wealth, to appreciate the various conditions of the physical, and to carry our habits of business into the chambers of the sick.

It is especially to moral influences proceeding from such causes, that I ascribe much of the acumen of American physicians in observing nature, and of concurring so remarkably in one decided practice—be it an active or an expectant plan which disease may demand; for decision and enlightened observation may be as necessary in one as in the other. American physicians are also generally familiar with the writings of some of those illustrious observers who form our best counsellors in the interpretation of nature; and it is only within a brief period that their attention has been at all directed to those oft-exploded physical theories of life which have so extensively supplanted the philosophy of organic nature in Europe. No obstacle, therefore, having been interposed to divert us from our habits of observing nature, and having no leisure for ambitious views, we have gone on with our former conceptions of the vital nature of disease, and of the operation of remedial agents, and would as soon wait for the plough to move itself in the furrow, as to adopt the imbecile treatment of that nation in Europe which studies the pathology and the diagnosis of disease only when its treatment has ceased to be possible, and which began the insane enterprise of reviving the worst absurdities of the darkest ages of our science. And how is it with our mother country? Deeply tainted, yet struggling with others of transcendent worth in Middle Europe, to maintain the ascendancy of truth. But, how stands the descendant, in comparative practical habits? The honest Britain still lives to witness the spirit of his declaration in greater force than ever, that, "after all British reproaches against the American government and American physicians, for permitting the yellow fever to commit such ravages, this yellow fever made incomparably greater proportional ravages in a British garrison, where the authority of medical police was unlimited." And yet again, says the same eminent man, "in the West Indies, on the continent of Europe, at home, wherever the British army was posted during the last war, its history of health has offered not only pretexts to a challenged rival to scorn the arrogant superiority of the British *modern* medical practice, but also reasons for an impartial man to pause upon the claim." *

* Beddoes on Fever and Inflammation, p. 235.

Such were American physicians when in all America there were only two medical institutions, and when their exactions were only commensurate with the financial ability of the country. Well may we, therefore, spurn the imputations of practical inferiority which have been sometimes heaped upon us even by those who derive their principal title to consideration from being born in the midst of so much enterprise and worth. It is the jealousy of narrow ambition, or the envy of more selfish or of weaker minds. But, whilst I would denounce the spirit of innovation which would overthrow the best institutions of the land, I certainly agree that were a more extended and varied knowledge of true science within our early grasp, it would exalt us yet higher in the scale of philosophy, and in the practical pursuit of our calling. Nor will I leave this important subject without saying, that I am determined to be correctly understood and correctly represented upon one fundamental point, at least—and that is, that I am an ardent advocate of a profound medical education—ever have been, and so mean ever to remain. I am ready to lend all my feeble aid to any plan which may be regarded by judicious and disinterested men as a feasible improvement of our present collegiate system.

PART SECOND.

Critical Analysis.

ART. VI.—*The Hospitals and Surgeons of Paris, an Historical and a Statistical account of the Civil Hospitals of Paris, with Miscellaneous Information and Biographical Notices of some of the most eminent of the living Parisian Surgeons.* By F. CAMPBELL STEWART, M. D. New York: J. & H. G. Langley. 1843. 8vo., pp. 432.

To the general reader, this must prove a highly interesting book; to the members of the profession generally, presenting as it does a lively picture of the profession in Paris, and also of the existing condition of its hospitals and medical institutions, it must be both interesting and useful; but there is a third class—those visiting Paris professionally—to whom it will prove of incalculable service as a guide.

"Having experienced," he says, "many inconveniences himself on his first arrival in Paris, from the want of correct knowledge as to the customs and habits of the place, and how to employ his time most advantageously, the author has endeavored to supply it to those who may be going abroad; and besides the information in regard to their addresses and the hours of admission to the various places of medical resort, which is interspersed under different heads throughout the pages forming the first part, it will be seen that some sections have been composed for the benefit of this class of readers alone. A full list of the medical and scientific journals published in Paris has been introduced; and the Bibliographical Index will, it is hoped, prove useful to those who may be desirous of procuring French medical works.

"The notices of the different Hospitals and Hospices have been extended, so as to embrace a pretty full account of each one; and the Sections devoted to the Schools of Medicine and Pharmacy, the Dissecting Rooms, Museums, &c., are believed to contain all the information likely to prove useful or interesting to the reader.

"In the article on 'Medical Instruction in France,' and the 'advantages of studying in Paris,' such branches of the profession have ben indicated as may be there pursued with the greatest facility, or to the greatest advantage by foreigners. The remarks on the 'Condition of the profession in France,' are believed to be just; and it cannot be denied, but that the general standard of professional acquirement in that country is much higher than in our own. The author has been requested to introduce into the work a notice of the present condition of Homœopathy in Paris; he regrets his inability to do so, from the circumstance of his being entirely ignorant of the estimation in which it is there held, never having once heard it named, or made a topic of conversation amongst scientific men, or the intelligent portion of the French community, during the whole period of his residence abroad."

The work is divided into two parts, first, the "*Hospitals of Paris*," and secondly, "*Lives of the Paris Surgeons.*"

Our author first treats of the general administration of Hospitals, their organization and their regimen. He then describes in detail the general hospitals, as the Hôtel-Dieu, the Hôpital de la Charité, de la Pitié, etc. Next come the special Hospitals, which are "for accommodating patients laboring under diseases which are of sufficiently frequent occurrence to authorize the establishment of a special institution for their treatment." Of these there are ten, of each of which a distinct description is furnished. Lastly, he treats of the Hôspices or almshouses, established in different parts of Paris and its vicinity for the reception of old, indigent, and incurable persons of both sexes, and for orphans and foundlings. Of these there are twelve.

There is also a *Bureau de Bienfaisance*, or Charity Office, established in each of the twelve arrondissements of Paris, for the relief of old and indigent persons, and of poor widows with large families; and there is likewise a Bureau des Nourrices, for the reception and accommodation of wet nurses, who are in want of situations, this last being a most important institution.

We have also interesting chapters upon the mortality in the public hospitals of Paris, their revenues and expenses. Moreover there are in Paris and its vicinity as many as sixty private hospitals, called *Maisons de Santé*.

But there is still another hospital, viz., the Royal Veterinary School and Hospital at Alfort, which, as it is the largest and most important of the kind in France, is quite fully described by Dr. Stewart. Its stables, gardens, museums, pharmacy, operating-room, lecture-rooms, etc., are all upon an extensive scale.

The remarks of our author upon medical instruction in France, upon the condition of the profession, and the advantages of studying at Paris, are very interesting and instructive.

The lectures, on all the branches of science, delivered at the public schools are gratuitous; and, moreover, as lecturing is one of the most common means adopted for gaining notoriety and advancement, a number of young men will be always found engaged in repeating the lectures of the professors. These courses likewise are usually free, and the general, as well as the special student, will find every avenue to learning laid open before him. The attainment of all kinds of knowledge is thus rendered comparatively facile, and in no other part of the world can general or professional studies be pursued to greater advantage, or at so little cost to the student, as in France.

The condition of the medical profession in France, is probably as elevated as in any other country of the world. Rigid tests of capability are demanded of all applicants for the honor of admission into its ranks, and the same fostering care is bestowed upon it by the government, as upon other professions. The system of education pursued is as well adapted to the present state of medicine as may be possible, and the preliminary examinations, to which all students are subjected before being allowed even to enter themselves as candidates for medical honors, have been the means of establishing a high standard of general acquirement. A gradual increase has been made during the last ten years, in the quantum of knowledge required by the medical faculties, and the last important step taken, was that making it incumbent on all students to obtain a diploma of Bachelor of Sciences, before they can be permitted to undergo their fifth or final examination for a degree.

The subjects that may be here studied under circumstances peculiarly favorable, are the following: Anatomy, diagnosis, obstetrics, pathologi-

cal anatomy, diseases of the skin, diseases of children, botany, diseases of the eye, practical chemistry, operative surgery, orthopedy, etc.

As the Concours (from *concourir*, to run together, to compete,) is peculiar to this country, we will here present the following account given by our author:

> The advantages attending the system of the Concours or public competition as established in France, have, after a test of many years, been found inestimable; by it an equal and fair opportunity is afforded to all for making known their respective qualifications, and all such as possess superior talent and acquirement are sure of meeting with encouragement and promotion. Its advantages are fully illustrated by the present position of the distinguished Valpeau, and most of those who now stand at the head of the profession in France, who, without friends or interest, would never, but for the Concours, have been able to work their way to the high positions which they now occupy. Dupuytren owed his elevation to successful competition, and always remained a strong advocate of the system.
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> All medical offices in France, whether civil or belonging to the army or navy, are put up for public competition, and he who is found best prepared, is generally selected to fill the situation. The system is extended from the dressers and students of Pharmacy in the hospitals, to the professors and highest officers, the tests of proficiency increasing in severity with the importance of the office contended for.
>
> Whenever a vacancy occurs either in the faculty or in the hospitals, notice is given that all who are entitled to do so, may come forward and enter themselves as candidates, after which a time is named for the examination, and this is usually conducted in a fair and honorable manner. The tests for all offices vary with the nature of the office; thus a prosector is examined, chiefly in reference to his anatomical knowledge and capabilities as a dissector; a professor with a view to his talent as a lecturer, and his knowledge of the particular branch which he will have to teach, and so on.

Our author next presents a series of interesting sections upon the School of Medicine, the School of Pharmacy, Private Courses, Dissecting Rooms, Libraries, Botanical Gardens, and Museums. Then follow Academies and Medical Societies, Medical and Scientific Journals, and even miscellaneous information as regards expenses and mode of living in Paris. The last includes hotels, lodging-houses, boarding-houses, restaurants, cafés, table d'hôtes, booksellers, surgical instrument makers, and finally the actual expenses incident to a medical student from abroad prosecuting his studies at Paris. But this is not all, we are even presented with a section on conveyances, including *fiacres*, *citadines*, *cabriolets*, and *omnibuses*, with the exact charges for public vehicles, as regulated by an *ordonnance* of the Prefect of Police.

The first part is concluded with a biographical index of thirty-one pages. This is intended for persons who are not perfectly familiar with the French medical literature of the day, showing them which are the most approved and recent publications on the various subjects of Medicine and Surgery.

Part second consists of the "Lives of the Paris Surgeons," in which are included the following individuals: Amussat, Baudens, Bérard, Breschet, Civiale, Cloquet, Dubois, Gerdy, Guérin, Jobert, Larrey, Laugier, Leroy, Lisfranc, Malgaigne, Marjolin, Ricord, Roux, Ségalas, Velpeau, Orfila.

The following introductory remarks will give the reader an idea of the *general* character of these distinguished *savants*:

Many combined circumstances tend to render interesting the lives of the distinguished individuals who now stand at the head of the medical profession in France. They are all men possessed of much natural talent, and who, from constant and continued application, have acquired a profound knowledge of their profession. Most of them have succeeded without friends, interest, or pecuniary assistance, in attaining enviable positions among the scientific men of Europe, and hence it cannot but be instructive, as well as interesting, to trace and examine their successive steps towards advancement and distinction.

Until within the last few years—since the Revolution of 1830—the medical profession was rather discountenanced in European society, and it was a difficult matter for its members to gain access to posts of honor or emolument under the government. As a natural consequence of this state of things, but very few persons entitled by birth or other advantageous circumstances to anticipate success in less laborious pursuits, would condescend to study, much less engage in the practice of medicine; all who were ambitious of other than a literary distinction, and desirous of participating in the enjoyments of refined and fashionable society, abandoned it. It was thus left almost entirely in the hands of the middle and lower classes, and owing to the liberality of the government in providing gratuitous instruction on the various branches of science, and extending equal facilities to all its subjects for obtaining information, poor and ambitious young men from the provinces were induced to repair to Paris and enter upon the study of the only profession through which *they* could expect to obtain distinction and worldly prosperity.

Thus it will be found that several of the eminent surgeons and physicians in France have arisen from the lowest castes of life, and many from the uttermost depths of poverty. Besides such as will be found in the following pages, there are many other instances in the history of the French medical profession, which go to prove that it is only necessary to use proper exertion and attention to ensure success, even under the most disadvantageous circumstances. Poverty always acts as a powerful stimulus; and Dupuytren used to illustrate this, for the encouragement of the poorer members of his class, by telling them in his lectures, that 'had not *Monsieur* Dupuytren been compelled from poverty to trim his student's lamp with oil from the dissecting-room, he never would have succeeded in becoming Monsieur *le Baron* Dupuytren.'

Although many of them are of comparatively low origin, the eminent French surgeons of the present generation are, for the most part, honorable, upright, and high-minded men—devoted to science, and indefatigable in their endeavors to extend and multiply the benefits of surgery. As a body, they present an imposing array of natural talent, professional experience, and extensive general acquirements; as individuals, they are, with some few exceptions, amiable and accomplished gentlemen, possessing the national gaiety and playful cheerfulness, tempered, however, by professional dignity and an appropriate gravity of demeanor.

Many of their predecessors now occupy places in history, and the time must come when the same honor will be extended to some of those whose lives are traced in the following pages.

ART. VII.—*Observations on Obstetric Auscultation, with an Analysis of the Evidences of Pregnancy, and an Inquiry into the Proofs of the Life and Death of the Fœtus in Utero.* By EVORY KENNEDY, M. D., Licentiate of the King and Queen's College of Physicians in Ireland, Lecturer on Midwifery, and the Diseases of Women and Children, at the Richmond Hospital School, and late Assistant to the Dublin Lying-in-Hospital. With an appendix containing Legal Notes, by John Smith, Esq., Barrister at Law. With Notes and Additional Illustrations, by Isaac E. Taylor, M. D. New York: J. & H. G. Langley. 1843. 12mo. pp. 311.

For this little work, illustrated with seventeen lithographs executed in Endicott's finest style, we predict a widely extended circulation. We have here presented within a small compass, what has been heretofore found scattered through tomes; and, indeed, some of the matter has never before been laid before the American reader, except perhaps through the pages of our periodical literature.

As regards the importance of the subject presented in this volume, the author justly remarks:

> If we for a moment consider the responsible task the medical adviser is occasionally called upon to perform, when desired to pronounce on the existence or absence of pregnancy; that peace of mind, domestic happiness, character, property, nay, even life itself, may be sacrificed by inaccuracy in his diagnosis; we shall find ample reason to question, whether there be, in the broad field of medical science, any subject which more calls for the attention of the practitioner, as well from its importance as from the difficulty so frequently attending its investigation.
>
> Every medical man, at all conversant with midwifery practice, knows how often he is required to give an opinion in cases of doubtful pregnancy, by his ordinary patients, who are naturally anxious to be acquainted with their real situation; and he also well knows what dissatisfaction and want of confidence his refusal to give a decided answer on this subject frequently engenders. How much is his embarrassment increased, when he is called on to decide in those cases where private character or public justice is at stake, and in which, from their very nature, must be expected nought but concealment and misrepresentation!
>
> It is a matter very easily proved, that difficulties in this respect do, and by no means very unfrequently, meet us in our practice. It shall be our endeavor to explain upon what these depend, to canvass the means at present relied upon for meeting them, and to offer some in addition, which may guide and assist us in overcoming them.

These subjects have, however, within the last few years, engaged some of the most eminent writers on Midwifery. Although much light has been thrown upon the diagnostic signs of pregnancy, yet the obscurity of the subject still demands much elucidation. In this state of acknowledged deficiency in our diagnosis, it is strange that more than twenty years have been allowed to elapse since Dr. Kergaradec directed the attention of the profession to obstetrical auscultation, without its splendid results having become generally known to the profession. Even in our systematic works on Midwifery, the subject seems to have mostly escaped the notice of authors. In our last No., however, we laid before our readers a valuable original communication upon this subject.

The following are the subjects treated of: 1. *Evidences of Pregnancy*, which are divided secondly, into those sensible to the medical attendant.

These are, firstly, *Tangible Evidences*, including vaginal examination, changes in the os uteri, development of the neck, tilting up of the fœtus, (*abattement*), abdominal enlargement, percussion, active motions of the fœtus, and passive motions (*ballottement*).

Among these evidences of pregnancy, we will bring under notice that of *abattement* alone :

There is a method of distinguishing the enlargement of the uterus from pregnancy, which will be available in many cases, and is well deserving of our attention, more particularly as it is less liable to deception, and goes more directly to prove the presence of what we seek, namely, a child in the uterus, than any signs as yet spoken of. This is the passive motion of the child, produced by tilting it upwards, with the finger suddenly pushed against the anterior part of the uterus between the *os uteri* and pubis; when, whether the child be alive or dead, provided it be moveable and sufficiently bulky to communicate the sensation, we shall observe it to rise from the finger, floating in the liquor amnii, and again descend with a slight shock, resting on the spot from whence it was dislodged, and communicating an impulse to the finger. This sign is detected most distinctly when the head of the child is situated beneath; and it is with the head the finger most frequently comes in contact. The period of pregnancy which answers best for the application of this test is from the fifth to the seventh month inclusive, as at an earlier or later period the child is either too large or too small to communicate the shock, and admit of the facility of motion necessary to produce it. In many cases it is impossible to produce this passive motion of the child; this may arise from narrowness of the vagina, the child being fixed, or situated high up in the uterus, so as to render it difficult to reach it with the finger in the manner pointed out. Although this passive motion of the child, or, as the French term it, *abattement*, is a sign of considerable importance, we must even in it guard against deception. The case most likely to deceive us by a resemblance to the *abattement* would be one of ascites combined with abdominal tumor, particularly if this were moveable; such, for instance, as fatty tumors of the mesentery, or tumors attached to any of the floating viscera.

Secondly, *Visible Evidences*, comprising mammary development, formation of areola, etc., emerging of umbilicus, abdominal fissures, discolored skin, spots, jaundice, etc., swelled limbs, Nauche's urinary test, etc.

By means of the chemical test proposed by M. Nauche, he says that pregnancy may always be detected "by allowing the urine of pregnant women or nurses to stand for some time, say from thirty to forty hours, when a deposit takes place of white, flaky, pulverulent grumous matter, being the caseum or peculiar principle of the milk formed in the breasts during gestation."

As regards the value of this sign, much difference of opinion exists. The American editor of this volume has himself investigated this subject very fully. Although it is entitled to little reliance as a sign *per se*, yet when we consider that no one of the signs can be regarded as absolutely certain, this chemical test becomes one of considerable value.

We now come to the third division, termed *Audible Evidences*, consisting of auscultation, mediate and immediate. The former are denominated the *signs of pregnancy*, but these are considered *demonstrable* evidences. If they do not, in all cases, furnish a positive and certain diagnosis of pregnancy, they will at least, provided the puerperal state is sufficiently advanced, enable us to decide with pretty great certainty. This part of the volume is invested with the highest interest; and were

it not that, in our last No., the uterine souffle, the pulsations of the fœtal heart, and the diagnosis of presentations and positions, were fully treated by Dr. Van Arsdale, we should here enlarge upon the subject.

This analysis of the evidences of pregnancy is continued in reference to various kinds, viz., *compound*, *complicated*, and *pseudo*-pregnancy, the last being divided into *nervous or ideal* and *premeditated* or *simulated*. Lastly, an inquiry into the proofs of the life and death of the fœtus in utero, is presented.

A curious and authentic case of uterine vagitus is related, which we will here quote; and we may add that we once witnessed a phenomenon bearing some analogy to this, which consisted in the child's repeatedly sucking our finger long before it was born; but as the child was finally still-born, in consequence of great pelvic deformity, it follows that, though it never breathed in the world, yet it did so, to some extent, before it got into the world.

It may be well to mention here a curious phenomenon observed by the author with regard to the fœtus in the uterus, namely, its power of breathing and crying in this position. This is a circumstance, the possibility of which, we confess we should more than question, had we not undoubted proof of the fact, as the following case will testify.

I was called up one night by an intelligent pupil in the hospital, who informed me, that a very strange sound was observed to come from a patient in labor, resembling exactly the whine of a child.

On going into the labor ward, I found the nurses and pupils surrounding a patient's couch with out-stretched necks, listening with greatest intensity and amazement; and on approaching within about six feet of the bed, I distinctly heard a low moaning whine, resembling the faint and painful cry of a delicate seven months' child; this became more distinct the nearer I approached the patient, and there could be no doubt whatever, that it came from the abdomen of the woman on the couch, however produced. Still sceptical, I applied the stethoscope, when the fact was proved beyond a doubt, as not only the cry mentioned, but the labored respiration of the fœtus was perfectly audible. A vaginal examination was instituted, and the head was found presenting, but high in the pelvis. The parts were only partially dilated, although the membranes were ruptured, and the waters had drained off shortly before. This woman was not delivered for four hours, and the above phenomena were observed by several of the pupils, up to the time of the child's birth. This patient's name was Morell, the date of her delivery the 2d of December, 1830.

This case not only establishes a curious, we had almost said incredible fact, but in a medico-legal point of view, is of some importance, and shows in a striking manner the futility of some of the tests most depended on in child-murder.

As regards pseudo-pregnancy, it appears that this curious simulation of what nature views as decidedly one of her first laws—the law of re-production—is not restricted to the human species.

Fodere gives cases in which it occurred in the bitch, the cat, and the cow. In these, all the symptoms of pregnancy were present; and even the supplemental functions were so perfectly called into action by this mistaken sympathy, that some of them had milk secreted, with which, although disappointed in their hopes of an offspring of their own, they were enabled to suckle the young of others.

The American editor has presented in this republication to his countrymen what has been long a desideratum to the obstetric student.

"He has also ventured," he says, "to draw comparisons between pregnant and non-pregnant females—primiparæ, and those who have borne children, which may possibly be acceptable to the younger members of the profession, and to those whose minds have not yet been directed to this subject. He has also enlarged more fully on other late signs of pregnancy, which have received but a passing notice from the author." In a word, as much valuable information has been elicited since the publication of Dr. Kennedy's work, he has not failed to combine this with the results of his own experience, thus rendering the whole a complete manual of obstetric auscultation.

But, in conclusion, we must again refer to the beautiful illustrations of this volume, not only as being very fine specimens of the lithographic art, but as being the result of the labor of the American editor, who found but one-third the present number, and these too of the rudest kind, in the original work.

ART. VIII.—*A Classical Dictionary: containing an account of the principal proper Names mentioned in Ancient Authors, and intended to elucidate all the important points connected with the Geography, History, Biography, Mythology, and fine Arts of the Greeks and Romans; together with an account of the Coins, Weights, and Measures, with tabular values of the same.* By CHARLES ANTHON, LL. D., Jay-Professor of the Greek and Latin Languages in Columbia College, New York, and Rector of the Grammar School. New York: Harper & Brothers: 1841. 8vo., pp. 1423.

A Dictionary of Greek and Roman Antiquities. Edited by WILLIAM SMITH, Ph. D., *and illustrated by numerous engravings on wood. First American Edition, carefully revised, and containing numerous additional articles relative to the Botany, Mineralogy, and Zoology of the Ancients.* By CHARLES ANTHON, LL. D., Prof., etc. New York: Harper & Brothers: 1843. 8 vo., pp. 1124.

AT the first glance of the reader at these titles, he may be induced to turn to the title-page of this magazine, in order to be sure that he has in his hands a medical work; but, after he shall have read the following notice of these two extraordinary productions, he will no longer doubt the propriety of their introduction here.

In the first place, we assume it to be universally admitted among our readers, that a physician ought not only to be well educated in his own profession, but ought to have a general acquaintance with the circle of human knowledge; and upon this ground alone we might be justified in introducing these volumes to their notice. It is, however, upon other grounds—*grounds strictly medical*—that we ask the attention of the profession to the writings of Charles Anthon, LL. D., whose literary labors constitute him an honor not only to his own country, but to all human kind.

As regards the "Classical Dictionary," we shall merely state that we

looked for the words, *Æsculapius, Hippocrates, Celsus, Galenus, Asclepiades, Aretæus, Oribasius, Aëtius, and Paul of Ægina*, and that under each we found a valuable and highly interesting article.

The "Dictionary of Greek and Roman Antiquities," we found perhaps still more prolific in ancient medical literature. Under the head of *Medicus*, an interesting article occurs, from which we make the following extract:

As there were no hospitals among the ancients, the chief places of study for medical students were the Ἀσκληπιεῖα, or temples of Æsculapius, where the votive tablets furnished them with a collection of cases. The Asclepiadæ (*vid.* MEDICINA) were very strict in examining into and overlooking the character and conduct of their pupils, and the famous Hippocratic oath, (which, if not drawn up by Hippocrates himself, is certainly almost as ancient,) requires to be inserted here, as being the most curious medical monument of antiquity. "I swear by Apollo the physician, by Æsculapius, by Hygeia, and Panaceia, and all the gods and goddesses, calling them to witness that I will fulfil religiously, according to the best of my power and judgment, the solemn promise and the written bond which I now do make. I will honour as my parents the master who has taught me this art, and endeavour to minister to all his necessities. I will consider his children as my own brothers, and will teach them my profession, should they express a desire to follow it, without remuneration or written bond. I will admit to my lessons, my discourses, and all my other methods of teaching, my own sons, and those of my tutor, and those who have been inscribed as pupils, and have taken the medical oath; but no one else. I will prescribe such a course of regimen as may be best suited to the condition of my patients, according to the best of my power and judgment, seeking to preserve them from any thing that might prove injurious. No inducement shall ever lead me to administer poison, nor will I ever be the author of such advice: neither will I contribute to an abortion. I will maintain religiously the purity and integrity both of my conduct and of my art. I will not cut any one for the stone, but will leave that operation to those who cultivate it (ἐκχωρήσω δὲ ἐργάτῃσιν ἀνδρῶσι πρήξιος τῆσδε.) Into whatever dwellings I may go, I will enter them with the sole view of succouring the sick, abstaining from all injurious views and corruption, especially from any immodest action towards women or men, freemen or slaves. If, during my attendance, or even unprofessionally in common life, I happen to hear of any circumstances which should not be revealed, I will consider them a profound secret, and observe on the subject a religious silence. May I, if I rigidly observe this my oath, and do not break it, enjoy good success in life, and in [the practice of] my art, and obtain general esteem forever; should I transgress and become a perjurer, may the reverse be my lot." As regards the passage of the oath, given above in the original Greek (ἐκχωρήσω δὲ κ. τ. λ.), though the writer has translated it thus, both here and also in page 241, he does not feel at all sure that the other construction, viz., making πρήξιος τῆσδε depend on ἐκχωρήσω, is not preferable. With regard to the oath itself, it is generally considered to be spurious; but M. Littré, the editor of the new Paris edition of Hippocrates, believes it to be genuine. For a copious and learned explanation of every clause of the oath, see Meibom's edition, Gr. and Lat. Lugd. Bat. 4to., 1643.

These sentiments speak volumes in favor of the nobleness of our art; and they teach us that a science that has had such an origin, cannot but be destined for the highest and noblest of human purposes.

In this Dictionary we likewise find the following subjects well treated: *Chirurgia, Diætetica, Dogmatici, Eclectici, Empirici, Gymnasium, Medicina, Methodici, Pathologia, Pharmaceutica, Physiologia, Pneumatici, Semeiotica, Therapeutica*, and *Theriaca*.

As regards the relation of Gymnastics to the Medical Art, the follow-

ing extract will prove both interesting and instructive to the modern physician, who pays too little attention to this which constituted an important part of the ancient system of therapeutics:

The games of the Greeks had an immediate influence upon the art of healing, because they considered gymnastics to be almost as necessary for the preservation of health as medicine is for the cure of diseases. It was for this reason that the gymnasia were dedicated to Apollo, the god of physicians. The directors of these establishments, as well as the persons employed under their orders, the bathers or aliptæ, passed for physicians, and were called so on account of the skill which long experience had given them. The directors, called παλαιστροφύλακες, regulated the diet of the young men brought up in the gymnasia; the sub-directors, or *Gymnastæ*, prescribed for their diseases; and the *inferiors* or bathers, aliptæ, intraliptæ, practised blood-letting, administered clysters, and dressed wounds, ulcers, and fractures. Two of these directors, Iccus of Tarentum, and Herodicus of Selymbria, a town of Thrace, deserve particular notice for having contributed to unite more closely medicine and gymnastics. Iccus, who appears to have lived before Herodicus (*Olymp.* lxxvii.) gave his chief attention to correcting the diet of the wrestlers, and to accustoming them to greater moderation and abstemiousness, of which virtues he was himself a perfect model. Plato considers him, as well as Herodicus, to have been one of the inventors of medical gymnastics. Herodicus, who is sometimes called Prodicus, lived at Athens a short time before the Peloponnesian war. Plato says that he was not only a sophist but also a master of the gymnasium and physician, and, in fact, he united in his own person these three qualities. He was troubled, says the same author, with very weak health, and tried if gymnastic exercises would not help to improve it; and having perfectly succeeded, he imparted his method to others. Before him medical dietetics had been entirely neglected, especially by the Asclepiadæ. If Plato's account may be taken literally, he much abused the exercise of gymnastics, as he recommended his patients to walk from Athens to Megara, and to return as soon as they had reached the walls of the latter town. The distance from Athens to Megara was 210 stadia, as we learn from Procopius. Dio Chrysostom calls it a day's journey. Modern travellers reckon eight hours. The author of the sixth book *De Morb. Vulgar*, agrees with Plato: "Herodicus," says he, "caused people attacked with fever to die, from walking and too hard exercise, and many of his patients suffered much from dry rubbing." A short time after we find, says Fuller, that Hippocrates, with some sort of glory, assumes to himself the honour of bringing that method to a perfection, so as to be able to distinguish πότερον τὸ σιτίον κρατεῖ τοὺς πόνους, ἢ οἱ πόνοι τὰ σιτία, ἢ μετρίως ἔχει πρὸς ἄλληλα, as he expresses it. Pursuant to this, we find him in several places of his works recommending several sorts of exercises upon proper occasions; as, first, friction or chafing, the effects of which he explains, and tells us that, as in some cases it will bring down the bloatedness of the solid parts, in others it will incarn and cause an increase of flesh, and make the part thrive. He advises walking, of which they had two sorts, their round and straight courses. He gives his opinion of the Ἀναπνεύματα, or preparatory exercises, which served to warm and fit the wrestlers for the more vehement ones. In some cases, he advises the Πάλη, or common wrestling, and the Ἀκροχειρίη, or wrestling by the hands only, without coming close, and also the Κωρυκομαχίη, or the exercise of the Corycus, or the hanging ball; the Χειρονομίη, a sort of dexterous and regular motion of the hands and upper parts of the body, something after a military manner; the Ἀλίνδησις, or rolling in sand; and once we find mentioned, with some approbation, the Ἥπειροι Ἵπποι, *Equi Indefiniti*, by which is probably meant galloping long courses in the open field.

As for Galen, he follows Hippocrates in this as closely as in other things, and declares his opinion of the benefit of exercises in several places; his second book, "De Sanitate Tuenda," is wholly upon the use of the *strigil*, or the advantage of regular chafing: he has written a little tract, Περὶ τοῦ διὰ Μικρὸς

Σφαιρας Γυμνασίον, wherein he recommends an exercise, by which the body and mind are both at the same time affected. In his discourse to Thrasybulus, Πότερον Ἰατρικῆς ἢ Γυμναστικῆς ἐστι τὸ Ὑγιεινόν, he inveighs against the athletic and other violent practices of the *gymnasium*, but approves of the more moderate exercises as subservient to the ends of a physician, and, consequently, part of that art. The other Greek writers express a similar opinion; and the sense of most of them in this matter is collected in Oribasius's "Collecta Medicinalia." In those remains which are preserved of the writings of Antyllus, we read of some sorts of exercises that are not mentioned by Galen or any former author; among the rest, the *Cricilasia*, as the translators by mistake call it, instead of *Cricoëlasia*. This, as it had for many ages been disused, Mercurialis himself, who has made the most judicious inquiries into this subject, does not pretend to explain; and I believe, says Freind, though we have the description of it set down in Oribasius, it will be hard to form any idea of what it was.

The ancient physicians relied much on exercise in the cure of the dropsy, whereas we almost totally neglect it. Hippocrates prescribes for one that has a dropsy καλαικώριαι, or *fatiguing exercises*, and he makes use of the same word in his Epidemics, and almost always when he speaks of the regimen of a dropsical person, implying that, though it be a labour for such people to move, yet they must undergo it; and this is so much the sense of Hippocrates, that Spon has collected it into one of the new aphorisms which he has drawn out of his new works. Celsus says of this case, "*Concutiendum multa gestatione corpus est.*" The Romans placed great reliance upon exercise for the cure of diseases; and Asclepiades, who lived in the time of Pompey the Great, brought this mode of treatment into great request. He called exercises *the common aids of physic*, and wrote a treatise on the subject, which is mentioned by Celsus in his chapter "De Frictione," but the book is lost. He carried these notions so far, that he invented the *Lecti Pensiles*, or hanging beds, that the sick might be rocked to sleep; which took so much at that time that they came afterward to be made of silver, and were a great part of the luxury of that people; he had so many particular ways to make physic agreeable, and was so exquisite in the invention of exercises to supply the place of medicine, that perhaps no man in any age ever had the happiness to obtain so general an applause; and Pliny says by these means he made himself the delight of mankind. About this time the Roman physicians sent their consumptive patients to Alexandrea, and with very good success, as we find by both the Plinys; this was done partly for the change of air, but chiefly for the sake of the exercise by the motion of the ship; and therefore Celsus says, "*Si vera Phthisis est, opus est longa navigatione;*" and a little after he makes *Vehiculum* and *Navis* to be two of the chief remedies. As for the other more common exercises, they were daily practised, as is manifest from Celsus, Cælius, Aurelianus, Theodorus Priscianus, and the rest of the Latin physicians. And we do not want instances of cures wrought by these means. Suetonius tells us that Germanicus was cured of a "crurum gracilitas," as he expresses it, (by which he probably means *an atrophy*,) by riding; and Plutarch, in his life of Cicero, gives us an account of his weakness, and that he recovered his health by travelling, and excessive diligence in rubbing and chafing his body. Pliny tells us that Annæus Gallio, who had been consul, was cured of a consumption by a sea voyage; and Galen gives us such accounts of the good effects of particular exercises, and they were practised so universally by all classes, that it cannot be supposed but they must have been able to produce great and good effects. However, from an attentive perusal of what we find on this subject in the classical authors, the reader can hardly fail of being convinced that the ancients esteemed gymnastics too highly, just as the moderns too much neglect them; and that in this, as in many other matters, both in medicine and in philosophy, truth lies between the two extremes.

ART. IX.—*On the Preparations of the Indian Hemp, or Gunjah, (Cannabis Indica:) their Effects on the Animal System in Health, and their Utility in the Treatment of Tetanus and other Convulsive diseases.* —By W. B. O'SHAUGHNESSY, M. D., Bengal Army, late Professor of Chemistry and Materia Medica in the Medical College of Calcutta. London, 1843.—8vo. pp. 38.

As this subject has recently attracted much attention in the various journals of the day, both professional and non-professional, we propose giving a view somewhat in detail.

"The narcotic effects of hemp," says Dr. S., "are popularly known in the South of Africa, South America, Turkey, Egypt, Asia Minor, India, and the adjacent territories of the Malays, Burmese, and Siamese. In all these countries hemp is used in various forms, by the dissipated and depraved, as the ready agent of a pleasing intoxication. In the popular medicine of these nations, we find it extensively employed for a multitude of affections, especially those in which spasm or neuralgic pain are the prominent symptoms. But in Western Europe its use, either as a stimulant or as a remedy, is equally unknown. With the exception of the trial, as a frolic, of the Egyptian "hasheesh," by a few youths in Marseilles, and of the clinical use of the wine of hemp by Hahnemann, as shown in a subsequent extract, I have been unable to trace any notice of the employment of this drug in Europe.

"Much difference of opinion exists on the question, whether the hemp so abundant in Europe, even in high northern latitudes, is identical in specific characters with the hemp of Asia Minor and India. The extraordinary symptoms produced by the latter depend on a resinous secretion with which it abounds, and which seems totally absent in the European kind. The closest physical resemblance or even identity exists between both plants; difference of climate seems to me more than sufficient to account for the absence of the resinous secretion, and consequent want of narcotic power in that indigenous in colder countries."

Its botanical characters are thus described:

Assuming, with Lindley and other eminent writers, that the *Cannabis sativa* and *Indica* are identical, we find that the plant is dicœcious, annual, about three feet high, covered over with a fine pubescence; the stem is erect, branched, bright green, angular; leaves, alternate or opposite, on long weak petioles; digitate, scabrous, with linear, lanceolate, sharply serrated leaflets, tapering into a long smooth entire point; stipules subulate; clusters of flowers axillary with subulate bractes; males lax and drooping, branched and leafless at base; females erect, simple and leafy at the base. Calyx downy, five parted, imbricated. Stamens five; anthers large and pendulous. Calyx covered with brown glands. Ovary roundish with pendulous ovule, and two long filiform glandular stigmas; achenium ovate, one seeded.—*Vide Lindley's Flora Medica*, p. 299.

The fibres of the stems are long and extremely tenacious, so as to afford the best tissue for cordage, thus constituting the material for one of the most important branches of European manufactures.

The seed is simply albuminous and oily, and is devoid of all narcotic properties.

Its chemical properties are defined as follows:

In certain seasons and in warm countries a resinous juice exudes and concretes on the leaves, slender stems, and flowers; the mode of removing this juice will be subsequently detailed. Separated and in masses it constitutes the *churrus* of Nipal and Hindostan, and to this, the type or basis of all the hemp preparations, are the powers of these drugs attributable.

The resin of the hemp is soluble in alcohol and æther; partially soluble in alkaline, insoluble in acid solutions; when pure, of a blackish grey color; hard at 90°; softens at high temperatures, and fuses readily; soluble in the fixed and in several volatile oils. Its odor is fragrant and narcotic; taste slightly warm, bitterish, and acrid.

The dried hemp plant, which has flowered and *from which the resin has not been removed*, is called GUNJAH. It sells for 1s. 6d. to 2s. for 2 lbs. in the Calcutta bazaars, and yields to alcohol twenty per 100 of resinous extract, composed of the resin (*churrus*), and green coloring matter (*chlorophylle*). Distilled with a large quantity of water or spirit, traces of essential oil pass over, and the distilled liquor has the powerful narcotic odor of the plant. The *gunjah* is sold for smoking chiefly. The bundles of *gunjah* are about two feet long and four inches in diameter, and contain twenty-four plants. The color is dusky green; the odor agreeably narcotic; the whole plant resinous and adhesive to the touch.

The larger leaves and capsules, without the stalks, are called "*bang, subjee*, or *sidhee*." They are used for making an intoxicating drink, for smoking, and in the conserve or confection termed *majoon*. *Bang* is cheaper than *gunjah*, and, though less powerful, is sold at such a low price that for less than a half-penny enough can be purchased to intoxicate an "experienced" person.

When used for the purpose of intoxication, the preparations of hemp are as follows:

Sidhee, subjee, and bang (synonymous) are used with water as a drink, which is thus prepared: About three tola weight, 540 troy grains, are well washed with cold water, then dried and rubbed to powder, mixed with black pepper, cucumber and melon seeds, sugar, half a pint of milk, and an equal quantity of water. This is considered sufficient to intoxicate an habituated person. Half the quantity is enough for a novice. This composition is chiefly used by the Mahomedans of the better class.

Another recipe is as follows:—

The same quantity of *sidhee* is washed, dried, and ground, mixed with black pepper, and a quart of cold water added. This is drank at one sitting. This is the favorite beverage of the Hindus who practise this vice, especially the Birjobassies and many of the Rajpootana soldiery.

From either of these beverages intoxication will ensue in half an hour. Almost invariably the inebriation is of the most cheerful kind, causing the person to sing and dance, to eat food with great relish, and to seek aphrodisiac enjoyments. In persons of a quarrelsome disposition it occasions, as might be expected, an exasperation of their natural tendency. The intoxication lasts about three hours, when sleep supervenes. No nausea or sickness of the stomach succeeds, nor are the bowels at all effected; next day there is slight giddiness and much vascularity of the eyes, but no other symptoms worth recording.

Gunjah is used for smoking only; one rupee weight, 180 grains, and a little dried tobacco are rubbed together in the palm of the hand with a few drops of water. This suffices for three persons. A little tobacco is placed in the pipe first, then a layer of the prepared *gunjah*, then more tobacco, and the fire above all.

Four or five persons usually join in this debauch. The hookah is passed round, and each person takes a single draught. Intoxication ensues almost instantly; and from one draught to the unaccustomed, within half an hour; and after four or five inspirations to those more practised in the vice. The effects differ from those occasioned by the *sidhee*. Heaviness, laziness, and agreeable reveries ensue, but the person can be readily roused, and is able to discharge routine occupations, such as pulling the punkah, waiting at table, &c.

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Ameer states that there are seven or eight *majoon* makers in Calcutta; that sometimes, by special order of customers, he introduces stramonium seeds, but never nux vomica; that all classes of persons, including the lower Portuguese, or "Kala Feringhees," and especially their females, consume the drug; that it

is most fascinating in its effects, producing extatic happiness, a persuasion of high rank, a sensation of flying, voracious appetite, and intense aphrodisiac desire. He denies that its continued use leads to madness, impotence, or to the numerous evil consequences described by the Arabic and Persian physicians. Although I disbelieve Ameer's statements on this point, his description of the immediate effects of *majoon* is strictly and accurately correct.

Most carnivorous animals eat it greedily, and very soon experience its narcotic effects, becoming ludicrously drunk, but seldom suffering any worse consequences.

In his historical details our author refers to notices of hemp and its uses by the Sanscrit, Arabic, and Persian writers. Much of this, however, seems to partake of the character of fabulous history. Let the reader judge of the following:

In Khorasan, however, it seems that the date of the use of hemp is considered to be far prior to Haider's era. Biraslan, an Indian pilgrim, the contemporary of Cosröes, is believed to have introduced and diffused the custom through Khorasan and Yemen. In proof of the great antiquity of the practice, certain passages in the works of Hippocrates may be cited, in which some of its properties are clearly described, but the difficulty of deciding whether the passages be spurious or genuine, renders the fact of little value. Dioscorides (lib. ij. cap. 169), describes hemp, but merely notices the emollient properties of its seeds; its intoxicating effects must consequently be regarded as unknown to the Greeks prior to his era, which is generally agreed to be about the second century of the Christian epoch, and somewhat subsequent to the life-time of Pliny.

In the narrative of Makrizi we also learn that oxymel and acids are the most powerful antidotes to the effects of this narcotic; next to these, emetics, cold bathing, and sleep; and we are further told that it possesses diuretic, astringent, and especially aphrodisiac properties. Ibn Beitar was the first to record its tendency to produce mental derangement, and he even states that it occasionally proves fatal.

In 780 M. E. very severe ordinances were passed in Egypt against the practice; the Djoneina garden was rooted up, and all those convicted of the use of the drug were subjected to the extraction of their teeth; but in 799 the custom re-established itself with more than original vigor. Makrizi draws an expressive picture of the evils this vice then inflicted on its votaries—"As its consequence, general corruption of sentiments and manners ensued, modesty disappeared, every base and evil passion was openly indulged in, and nobility of external form alone remained to these infatuated beings."

As regards the medicinal properties assigned to hemp by the ancient Arabian and Persian writers, our author is also rich in extracts. He refers to the 35th chapter of the 5th volume of "Rumphius' Herbarium Amboinense," p. 208, ed. Amsterd., A. D. 1695, as containing a long and excellent account of hemp, illustrated by two good plates. Of this article, he presents the subjoined epitome:

Rumphius first describes botanically the male and female hemp plants, of which he gives two admirable drawings. He asssigns the upper provinces of India as its *habitat*, and states it to be cultivated in Java and Amboyna. He then notices very briefly the exciting effects ascribed to the leaf, and to mixtures thereof with spices, camphor and opium. He alludes doubtingly to its alleged aphrodisiac powers, and states that the kind of mental excitement it produces depends on the temperament of the consumer. He quotes a passage from Galen, lib. i. (de aliment. facult.), in which it is asserted that in that great writer's time it was customary to give hemp seed to the guests at banquets as a promoter of hilarity and enjoyment. Rumphius adds, that the Mahomedans in his neighbourhood frequently sought for the male plant from his garden, to be given

to persons afflicted with virulent gonorrhœa and with asthma, or the affection which is popularly called "stitches in the side." He tells us, moreover, that the powdered leaves check diarrhœa, are stomachic, cure the malady named *pitao*, and moderate excessive secretion of bile. He mentions the use of hemp smoke as an enema in strangulated hernia, and of the leaves as an antidote to poisoning by orpiment. Lastly, he notices in the two subsequent chapters varieties of hemp, which he terms the *gunjah sativa* and *gunjah agrestis*.

This was the amount of preliminary information possessed by our author, when he entered upon his experiments to determine its application to man as a remedial agent.

There was sufficient to show that hemp possesses, in small doses, an extraordinary power of stimulating the digestive organs, exciting the cerebral system, of acting also on the generative apparatus. Larger doses, again, were shown by the historical statements to induce insensibility or to act as a powerful sedative. The influence of the drug in allaying pain was equally manifest in all the memoirs referred to. As to the evil sequelæ so unanimously dwelt on by all writers, these did not appear to me so numerous, so immediate, or so formidable, as many which may be clearly traced to over-indulgence in other powerful stimulants or narcotics—viz. alcohol, opium, or tobacco.

The dose in which the hemp preparations might be administered, constituted, of course, one of the first objects of inquiry. Ibn Beitar had mentioned a *direm*, or forty-eight grains of *churrus;* but this dose seemed to me so enormous, that I deemed it expedient to proceed with much smaller quantities. How fortunate was this caution, the sequel will sufficiently denote.

An extensive series of experiments on animals was in the first place undertaken, among which the following may be cited:—

Expt. 1.—Ten grains of Nipalese *churrus*, dissolved in spirit were given to a middling sized dog. In half an hour he became stupid and sleepy, dozing at intervals, starting up, wagging his tail as if extremely contented; he ate some food greedily; on being called to he staggered to and fro, and his face assumed a look of utter and helpless drunkenness. These symptoms lasted about two hours, and then gradually passed away; in six hours he was perfectly well and lively.

Expt. 2.—One drachm of *majoon* was given to a small sized dog; he ate it with great delight, and in twenty minutes was ridiculously drunk; in four hours his symptoms passed away, also without harm.

Expts. 3, 4, and 5.—Three kids had ten grains each of the alcoholic extract of *gunjah*. In one no effect was produced; in the second there was much heaviness, and some inability to move; in the third a marked alteration of countenance was conspicuous, but no further effect.

Expt. 6.—Twenty grains were given, dissolved in a little spirit, to a dog of very small size. In a quarter of an hour he was intoxicated; in half an hour he had great difficulty of movement; in an hour he had lost all power over the hinder extremities, which were rather stiff but flexible; sensibility did not seem to be impaired, and the circulation was natural. He readily acknowledged calls by an attempt to rise up. In four hours he was quite well.

In none of these and several other experiments was there the least indication of pain, or any degree of convulsive movement observed.

It seems needless to dwell on the details of each experiment; suffice it to say that they led to one remarkable result—that while carnivorous animals and fish, dogs, cats, swine, vultures, crows, and adjutants, invariably exhibited the intoxicating influence of the drug, the graminivorous, such as the horse, deer, monkey, goat, sheep, and cow, experienced but trivial effects from any dose we administered.

Encouraged by these results, no hesitation could be felt as to the perfect safety of giving the resin of hemp an extensive trial in the cases in which its apparent powers promised the greatest degree of utility.

The first cases selected were two of acute rheumatism and one of the

chronic form; and in one of these, the most unequivocal symptoms of *catalepsy* were developed by the influence of this narcotic.

We raised him to a sitting posture, and placed his arms and limbs in every imaginable attitude. A waxen figure could not be more pliant or more stationary in each position, no matter how contrary to the natural influence of gravity on the part.

To all impressions he was meanwhile almost insensible; he made no sign of understanding questions; could not be aroused. A sinapism to the epigastrium caused no sign of pain. The pharynx and its coadjutor muscles acted freely in the deglutition of the stimulant remedies which I thought it advisable to administer, although the manifest cataleptic state had freed me altogether of the anxiety under which I before labored.

The second patient had meanwhile been roused by the noise in the ward, and seemed vastly amused at the strange aspect and the statue-like attitudes in which the first patient had been placed, when on a sudden he uttered a loud peal of laughter, and exclaimed that "four spirits were springing with his bed into the air." In vain we attempted to pacify him; his laughter became momentarily more and more uncontrollable. We now observed that the limbs were rather rigid, and in a few minutes more his arms or legs could be bent, and would remain in any desired position. A strong stimulant drink was immediately given, and a sinapism applied. Of the latter he made no complaint, but his intoxication led him to such noisy exclamations that we had to remove him to a separate room; here he soon became tranquil, his limbs in less than an hour gained their natural condition, and in two hours he represented himself to be perfectly well and excessively hungry.

The first patient continued cataleptic till one A. M., when consciousness and voluntary motion quickly returned, and by two A. M., he was exactly in the same state as the second patient.

The third man experienced no effect whatever, and on further inquiry it was found that he was habituated to the use of *gunjah* in the pipe.

On the following day it gave me much pleasure to find that both the individuals above mentioned were not only uninjured by the narcotic, but much relieved of their rheumatism; they were discharged quite cured in three days after.

The next case was one of *hydrophobia*. Two grains of hemp resin, in a soft pillular mass, were ordered every hour; and at the sixth dose, he fell asleep, and had some hours' rest. But on the following morning, tortured by thirst, he again attempted to drink, and again ensued "the indescribable horrors of the paroxysm."

Four days thus passed away, the doses of hemp being continued. When he fell asleep, on waking the paroxysms returned, but were again almost immediately assuaged as at first. Meanwhile, purgative enemata were employed, and he partook freely of solid food, and once drank water without the least suffering. But about three P. M. of the fifth day he sunk into a profound stupor, the breathing slightly stertorous; in this state he continued, and without further struggle death terminated his sufferings at four A. M. on the 27th of November.

Reviewing the preceding summary of this interesting case, it seems evident that at least one advantage was gained from the use of the remedy—the awful malady was stripped of its horrors; if not less fatal than before, it was reduced to less than the scale of suffering which precedes death from most ordinary diseases.

While this case was under treatment, the interest excited among the pupils of the school, induced them to try experiments on one another.

In one pupil, Dinonath Dhur, a retiring lad of excellent habits, ten drops of

the tincture, equal to a quarter of a grain of the resin, induced in twenty minutes the most amusing effects I ever witnessed. A shout of laughter ushered in the symptoms, and a transitory state of cataleptic rigidity occurred for two or three minutes. Summoned to witness the effects, we found him enacting the part of a Rajah giving orders to his courtiers; he could recognise none of his fellow students or acquaintances; all to his mind seemed as altered as his own condition; he spoke of many years having passed since his student's days; described his teachers and friends with a piquancy which a dramatist would envy; detailed the adventures of an imaginary series of years, his travels, his attainment of wealth and power; he entered on discussions on religious, scientific, and political topics, with astonishing eloquence, and disclosed an extent of knowledge, reading, and a ready apposite wit, which those who knew him best were altogether unprepared for. For three hours and upwards he maintained the character he at first assumed, and with a degree of ease and dignity perfectly becoming his high situation. A scene more interesting it would be difficult to imagine. It terminated nearly as suddenly as it commenced, and no headache, sickness, or other unpleasant symptom followed the innocent excess.

It was tried likewise in several cases of *epidemic cholera*, which was then prevailing.

The durwan of the college, an athletic Rajpoot, was attacked, and came under my treatment after he had been ill seven hours; he was pulseless, cold, and in a state of imminent danger, the characteristic evacuations streaming from him without effort. Half a grain of the hemp resin was given, and in twenty minutes the pulse returned, the skin became warm, the purging ceased, and he fell asleep. In an hour he was cataleptic, and continued so for several hours. In the morning he was perfectly well and at his duty as usual.

This passage was written in 1838, when our author was not entirely satisfied of the value of hemp in cholera; but subsequent experience confirmed his favorable opinion, and in 1843, he writes thus:

I know no remedy equal to it as a general and steady stimulant when given to *Europeans* in half drachm doses during the tractable stage of this disease. I have known the pulse and heat return and the purging checked by a single dose. It allays vomiting much more certainly than the opium preparations, and is not more likely than these to lead to cerebral congestion on the cessation of cholera symptoms. The cheering effect on the patient's spirits is not the least benefit this remedy confers.

We now come to its use in *Tetanus*,—an affection in which Dr. O'S. regards the powers of the remedy to be satisfactorily and incontrovertibly established. As these cases are of more than ordinary importance, we will present several in detail:

The first case of this disease treated by hemp was that of Ramjam Khan, aged thirty, admitted to the College Hospital on the 13th of December, 1838, for a sloughing ulcer on the back of the left hand. Five days previously a native empiric had applied a red hot *gool* (the mixture of charcoal and tobacco used in the hookah) to the back of the left wrist, as a remedy for chronic dysentery and spleen. The patient's brother was similarly cauterised on the same day. In both sloughing took place down to the tendons. Symptoms of tetanus occurred on the 24th of December. The brother, who had refused to avail himself of European aid, had been seized with tetanus at his own home four days previously, and died after three days' illness. On the 26th December spasms set in, and recurred at intervals of a few minutes; the muscles of the abdomen, neck, and jaws became firmly and permanently contracted. Large doses of

opium with calomel having been administered for some hours without the least alleviation of symptoms, and his case having, on consultation, been pronounced completely hopeless, I obtained Mr. Egerton's permission to subject the poor man to the trial of the hemp resin. Two grains were first given at half past two P. M., dissolved in a little spirit. In half an hour the patient felt giddy; at five P. M., his eyes were closed, he felt sleepy, and expressed himself much intoxicated.

He slept at intervals during the night, but on waking had convulsive attacks.

On the 27th, two grains were given every third hour (a purgative enema was also administered, which operated three times); the stiffness of the muscles became much less towards evening, but the spasms returned at intervals as before; pulse and skin natural.

28. Improved; is lethargic but intelligent; spasms occasionally occur, but at much longer intervals, and in less severity.

28. Dose of hemp increased to three grains every second hour. Symptoms moderating.

30. Much intoxicated; continues to improve.

January 1, 1839. A hemp cataplasm applied to the ulcer, and internal use of remedy continued. Towards evening was much improved; spasms trivial; no permanent rigidity; had passed two *dysenteric stools.*

2. Morning report: Had passed a good night, and seems much better. Evening report: Doing remarkably well.

3, 4, and 5. Continues to improve. Hemp resin in two grain doses every fifth hour.

6. Five P. M. Feverish; skin hot; pulse quick; all tetanic symptoms gone; passing mucous and bloody stools. Leeches to abdomen; a starch and opium enema with three grains of acetate of lead every second hour; tepid sponging to the body; hemp omitted.

7. Six A. M. Still feverish; stools frequent, mucous; abdomen tender on pressure; no appetite; the ulcer sloughy, ragged, and offensive. Opium and acetate of lead continued; abdomen leeched; sore dressed with water. At noon there was a slight rigidity of abdominal muscles. Hemp resumed. At three P. M., became intoxicated and hungry; ulcer extremely dry, foul, and abominably fœtid; towards evening rigidity ceased. Hemp discontinued.

From this day the tetanus may be considered to have ceased altogether, but the dysenteric symptoms continued, despite of the use of opium and acetate of lead; the ulcer, too, proved utterly intractable. Some improvement in the dysenteric symptoms occurred from the 10th to the 15th, when natural stools were passed. He seemed gaining strength, but the wound was in no wise improved; the slough, on the contrary, threatened to spread, and two metacarpal bones lay loose in the centre of the sore. On consultation it was agreed to amputate the arm, but to this the patient peremptorily objected. The mortification now spread rapidly, and, to our infinite regret, he died of exhaustion on the night of the 23d of January.

An unprejudiced review of the preceding details exhibits the sedative powers of the remedy in the most favorable light; and, although the patient died, it must be remembered that it was of a different disease, over which it is not presumed that the hemp possesses the least power.

The *second case* was that of Chunoo Syce (treated by Mr. O'Brien, at the Native Hospital), in whom tetanus supervened on the 11th of December, after an injury from the kick of a horse. After an ineffectual trial of turpentine and castor-oil in large doses, two grain doses of hemp resin were given on the 16th of December. He consumed in all 134 grains of the resin, and left the hospital cured on the 28th of December.

Third case.—Huroo, a female, aged twenty-five, admitted to the Native Hospital on the 16th of December; had tetanus for the three previous days, the sequel of a cut on the left elbow received a fortnight before. Symptoms violent on admission. Turpentine and castor-oil given repeatedly without effect; on the 16th and 17th, three grains of hemp resin were given at bed-time. On the morning of the 18th she was found in a state of complete catalepsy, and re-

mained so until evening, when she became sensible, and a tetanic paroxysm recurred. Hemp resumed, and continued in two grain doses every fourth hour. She subsequently took a grain twice daily till the 8th of February, when she left the hospital apparently quite well.

Mr. O'Brien has since used the hemp resin in five cases, of which four were admitted in a perfectly hopeless state. He employed the remedy in *ten grain doses* dissolved in spirit. The effect he describes as almost immediate relaxation of the muscles and interruption of the convulsive tendency. Of Mr. O'Brien's seven cases four have recovered.

In the Police Hospital of Calcutta, the late Dr. Bain has used the remedy in three cases of traumatic tetanus, of these one has died and two recovered.

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The preceding facts are offered to the professional reader with unfeigned diffidence as to the inferences I feel disposed to derive from their consideration. To me they seem unequivocally to show that when given boldly and in large doses, the resin of hemp is capable of arresting effectually the progress of this formidable disease, and in a large proportion of cases, of effecting a perfect cure.

In these affections, Dr. O'S. considers no trial of the drug at all conclusive, unless pushed to the extent of inducing stupor and insensibility.

As regards its use in *Delirium Tremens*, our author is equally sanguine as to its remediate virtues.

I have given the tincture of hemp an extensive trial in this disease, and have had much reason to be gratified with its effects. In action it resembles opium and wine, but is much more certain than these remedies. I have no hesitation in saying, that in the cases in which the opium treatment is applicable, hemp will be found far more effectual. The changed state of mind it produces is truly wonderful. From the appalling terror which generally predominates, the patient soon passes into a state of cheerfulness, often of boisterous mirth, and soon sinks into a happy sleep. Of course there are many cases in which this, or any other narcotic should not be employed.

The following is our author's formula for making this preparation:

The *resinous extract* is prepared by boiling the rich, adhesive tops of the dried *gunjah* in spirit (sp. gr. 835), until all the resin is dissolved. The tincture thus obtained is evaporated to dryness by distillation, or in a vessel placed over a pot of boiling water. The extract softens at a gentle heat, and can be made into pills without any addition.

The *tincture* is prepared by dissolving the extract in spirit of 835° density.

Doses, &c.—In *tetanus* a drachm of the tincture every half hour until the paroxysms cease, or catalepsy or narcotism is induced. In *hydrophobia* I recommend the resin in soft pills, to the extent of ten to twenty grains to be chewed by the patient, and repeated according to the effect. In *cholera*, thirty drops of the tincture every half hour will be often found to check the vomiting and purging, and bring back warmth to the surface. My experience would here lead me to prefer *small* doses of the remedy in order to excite rather than narcotise the patient.

The question now arises—Has the profession in this therapeutic agent gained an anti-convulsive remedy, of truly great value? Our author, with whom we have recently had the pleasure of meeting in this city, certainly entertains a conviction of the affirmative. But, as new medicines have often cheated the most circumspect investigators a proper exercise of caution surely demands the frequent repetition of these experiments. In medicine we find that fashion is not without its influence, and that a remedy extolled by one generation is wholly neglected

by the next. Be it, however, real or fictitious, as regards its ultimate and permanent value, there can surely be no difference of opinion in relation to the degree of credit that justly belongs to Dr. O'Shaughnessy for his indefatigable researches.

From a statement made by Mr. Ley, at a recent meeting of the Royal Medico-Botanical Society, it appears that the Indian hemp *(Cannabis Indica,)* and the European variety, *(Cannabis Sativa,)* are identical in all respects with the exception that the latter is almost deficient in the resin upon which its narcotic and anti-convulsive powers depend. Mr. Ley also reports several cases in the Provincial Medical Journal, in which the anti-convulsive powers of this remedy were decidedly manifested; but Dr. Pereira, who gives an account of it in the last edition of his Materia Medica, seems to think that its powers have been overrated. In his hands, those striking effects described by Dr. O'Shaughnessy did not follow,—a failure that he attributes, in some measure, to a deterioration of the drug, resulting from its mode of preparation, perhaps in its passage from India. Let it, however, be further and fairly tested by experiment.

ART. X.—*Report upon the Effects of Poisonous Smoked Beef, by* DRS. M. POST, A. E. HOSACK, and J. R. CHILTON. Document No. 43. Board of Aldermen, Oct. 24, 1842., pp. 26.

Having completed the investigations, directed by the Municipal Authorities, relative to the effects produced by poisonous smoked beef, the Committee present a Report highly interesting in all its detail. They state—

That, on the 24th of December last, seven persons, members of a family residing in this city, were suddenly attacked with alarming symptoms under the following circumstances:

About nine hours after having partaken of an ordinary quantity of smoked beef, obtained from a neighboring grocer, pain and uneasiness were experienced at the præcordial region, which, extending to the back and loins, were only temporarily relieved by the dejections which followed: vomiting soon supervened, attended with great thirst and a burning sensation at the pit of the stomach; indeed, the irritability of this organ soon became so great, that no substance, either as food or medicine, could be retained by it for an instant. These symptoms soon assumed the most aggravated form, nature being taxed to the utmost to eliminate from the system the noxious matter with which it was infected. As a consequence of this excessive action, the greatest prostration followed,—the functions of the nervous, the muscular, and the digestive systems were much impaired,—and so protracted has been the period of convalescence, that some of the patients who were more severely attacked, still suffer from the effects of this indisposition.

The primary symptoms being those of ordinary cholera, did not excite in the minds of the persons affected, any suspicion as to the cause of the illness until being closely interrogated by the attending physician, Dr. Fayette Cooper, the fact was elicited that they had each partaken of a quantity of smoked beef on the evening preceding the morning on which they were attacked. Similar in-

stances soon multiplying in other families, amounting in all to forty-three,* an interchange of visits took place among the attending physicians; and the fact being ascertained that each patient affected had used the same article, it was not doubted that the beef in question was impure, unhealthy, or contained some poisonous principle.

One case which occurred in the practice of Dr. A. T. Hunter, has proved fatal. The patient, a little girl, aged six years, had previously been subject to attacks of visceral inflammation, from which she recovered under the operation of appropriate remedies. In the present instance, she partook of the unhealthy smoked beef, in common with other members of the family, who in consequence were all seized with severe illness, manifested by the symptoms described above. They were all restored to health, with the exception of the little girl. In her case there was no remission of the symptoms, and she died on the fifteenth day from the commencement of the attack. A post mortem examination being made, the blood was found not coagulated,—it followed the knife freely, as in instances of death from drowning, lightning, &c.; the mesentery was enlarged; the mucous coat of the ileum exhibited a highly inflamed appearance, which was confined to a space of about six inches in length, and embraced the entire calibre of the intestine. The stomach, brain, and other organs, appeared not to have suffered any lesion.

That the disease thus described existed independently of any local causes, is obvious from the fact that it appeared in various and remote districts of the city, without any apparent chain of connection, save the common origin of the poisonous smoked beef.

Portions of this beef were subjected to various modes of chemical analysis by Dr. Chilton; but as this experienced chemist was not able to detect the presence of any mineral or vegetable poison, it was determined by the committee to institute a series of observations as regards the effects of this same poisonous beef upon animals; and these experiments, which were performed under the immediate inspection of the then resident Physician, Dr. John W. Francis, led to the following conclusions:

First. That the beef contained no mineral or vegetable poison.

Second. That when eaten it produced aggravated symptoms of disease in the animals.

Third. That a decoction made from the infected beef, when thrown into the circulation, produced death in about three hours and a half.

Fourth. That a similar preparation, made from sound beef, produced no marked signs in the animal experimented on.

Fifth. That the poisonous principle was not resident in the fat of the beef, which is found to be the case when this principle is developed by putrefaction.

Sixth. That putrefaction in different stages produces no effect upon the animals.

The Committee thus arrive at the "irresistible conclusion," that "the animal from which the beef in question was taken, had been affected with some disease, rendering its flesh highly poisonous as food." Now we feel constrained to protest against the *irresistibleness* of this conclusion, on the ground that it is *not impossible* that the animal, when killed, was in a normal condition, and that the poisonous nature of its flesh is due to changes which occurred subsequently. At the same time, we are free to say that we regard the inference of the Committee as good perhaps, as anycother.

The Committee next present an excellent synoptical view of animal

* Seven of these cases occurred in the practice of Dr. Green, of Hudson street.

poisons; then follows a description of a remarkable endemic peculiar to the western portion of the United States, being seldom or never observed east of the Alleghanies. This disease is known by the appellation of *Milk Sickness* or *Trembles*. The former name has its origin in the circumstance that the disease is frequently communicated to man by the use of the milk of an infected animal, though it will be as readily produced by eating the flesh; and the latter name arose from the symptoms of a *trembling motion* of the voluntary muscles manifested in cattle. We deem, however, no extended description here necessary, as the character of this singular affection is well known; but as regards its etiology, nothing certain has been determined since it was first noticed by the French missionary, Father Hennepin. Suffice it to add, that among the early immigrants, whole communities, on account of the prevalence of this malady in a particular locality, which is generally distinctly circumscribed, were often compelled to seek another; and even, at this day, those who venture within the boundaries of an infected district, are constrained, as a condition of their residence, to abstain from the flesh of the cattle living within the same limits, as well the milk and its preparations. In some of these infected districts, it is said that the inhabitants, with a recklessness of human life that seems incredible, carry the butter and cheese, which they dare not themselves venture to eat, to the markets of the western cities; and that thus are induced morbid symptoms and even death, regarded by the unsuspecting medical attendant as some new or anomalous form of disease. Moreover, as the disease would seem often to lie a long time dormant, cattle may also be driven a considerable distance with the disease lurking in them, that is, until developed by over exertion, or some other cause perhaps accidental.

The Committee continue—

From the inquiries which we have made, we have ascertained that immense droves come from the west to supply our markets: they are driven across the mountains and reach New York from the south, hence they are called by dealers, "Southern Cattle." Many of these cattle become diseased on the route, and are then exchanged for the pasturage of the herd. In this condition they are frequently slaughtered by the farmers, the flesh sent to this city and exposed for sale, producing in persons, who make use of it, symptoms of aggravated cholera morbus. Physicians attest that they have frequently met with such cases, which it was impossible to account for in any other way.

Numerous instances occur, in which the butchers of our city have found the viscera of animals slaughtered, in a highly diseased condition; in some cases, being almost disorganized. The liver, especially in southern or western cattle, is very liable to be thus affected. The undersigned, however, avail themselves of this occasion, to say that no instance has occurred to them, in which this class of our citizens have ever permitted such beef to be placed upon their stalls, in our markets; but, on the contrary, they believe them solicitous to protect their customers from a fraud, so dangerous in its consequences, and so much in opposition to their own true interests.

So invariably are the livers of the cattle west of the Alleghanies found in a diseased condition, that this viscus is always cast away, it being actually unknown as an article of diet.

Did our limits permit, it would afford us pleasure to make more extended quotations from this document, deserving, as it does, a more permanent record than the pages of a pamphlet.

The Committee, in conclusion, urge upon the constituted authorities the absolute necessity of adopting some method which shall in future protect our citizens from occurrences of so dangerous a character:

For this purpose they most respectfully propose the erection, by the city, of one or more extensive abattoires or slaughter buildings, similar in plan to those erected by the French government in 1809; and they would also suggest as an improvement to that plan, the appointment, by the Common Council, of the requisite number of competent persons, whose duty it shall be to inspect all animals slaughtered for the use of the city.

By this arrangement, they are persuaded that the citizens would gain greatly by the security they would possess that the food consumed by them was pure and healthy; by the cleanliness which would be observed in the establishments; by the removal of the buildings which at present constitute offensive nuisances; and in the certainty that the system would be burdensome to none, but, on the contrary, would recommend itself on the score of convenience and economy.

We approve of these regulations in the main; but if it is expected from these "competent persons" to decide whether cattle have been injured by overheating, or whether they labor under "milk sickness," we pity the plight of these *health-officers*, who would have a question to decide even more complex than that of a Rondout fever.

Upon this subject, we find in Pereira on "Food and diet," the following remarks:

It deserves to be specially noticed, with regard to animal foods in general, that when obtained from animals affected with disease at the time of their death, they are always dangerous, and have in some cases proved fatal.*

Moreover, animal foods, even if procured from perfectly healthy individuals, sometimes suffer a peculiar kind of decay or putrefaction, by which they acquire poisonous properties. Thus, *Sausages* made of the flesh, viscera, or blood of animals, and cured by smoking, have sometimes acquired, by keeping, highly deleterious qualities, which in many cases, has been attended with fatal results. Buchner ascribes the effects to the presence of a peculiar fatty acid, which has been termed *botulinic acid*, (*Wurst-fett-saure.*) *Bacon*, and probably other kinds of cured meat, *Ham-pie*, *Cheese*, *Milk*, *Goose-grease*, (see p. 128,) *Smoked Sprats*, *Pickled Salmon*, *Kipper*, or *Smoked Salmon*, (see p. 136,) and the decayed flesh of quadrupeds, (as veal and beef,) have also at times produced effects analagous to those caused by the sausages above alluded to.

The cause of the poisonous quality of those animal foods is involved in complete obscurity. Liebig has offered an ingenious but gratuitous hypothesis concerning it. The sausages, he says, are in a peculiar state of putrefaction; and in this condition "exercise an action upon the organism, in consequence of the stomach, and other parts with which they come in contact, not having the power to arrest their decomposition; and entering the blood in some way or other, while still possessing their whole power, they impart their peculiar action to the constituents of that fluid.

Among the cattle of our western country, and especially of Ohio, there are frequently found in the liver the most extraordinary heterologous formations. This viscus is often discovered completely studded with osseous sacs, containing a dark grumous fluid, in which lives a species of entozoa, having physical characters almost identical with the native leech. Of these leeches, as many as fifty or sixty may be found in a single liver, so that not a cubic inch of normal liver remains. A friend who has investigated this curious phenomenon, promises us a description.

* Tiedemann, *Untersuchungen über das Nahrungs-Bedürfniss*, &c. pp. 119-120; also, *Lond. Med. Gazette*, Oct. 21, 1842.

ART. XI.—*Minor Surgery: or Hints on the every-day Duties of the Surgeon.*—By HENRY H. SMITH, M. D., Lecturer on Minor Surgery, etc. Illustrated by Engravings. Ed. Barrington and Geo. D. Haswell: Philadelphia, 1843. 18mo. pp. 303.

WE venture to predict for this little volume a successful career, for we have here a *means* adapted to an *end*. It is admitted, for instance, on every hand, that there is a large class consisting of medical students and young practitioners, who, in consequence of the shortness of the period usually allotted to a course of lectures on Surgery, find themselves deficient in the amount of knowledge required for daily practice. This constitutes the *end*. On the other hand, we have here a volume strikingly adapted to supply these wants, consisting of the *methods of Dressing and the Minor Surgical Operations;* and this forms the *means*.

In executing this task, Dr. Smith tells us that "he has drawn freely on the works of MM. Velpeau, Gerdy, Mayor, and others, as well as upon many practical details obtained from the distinguished Surgeons of the Pennsylvania Hospital, during a residence under them in that institution."

The work is divided into four parts. The first is "*On the Preparation and Application of Dressings*," which embraces a description of the materials and their mode of application, such as lint, compresses, adhesive strips, setons, poultices, plasters, irrigation, rules for dressing, etc. Part second consists of three sections: 1. the "*Preparation and Application of the Bandage*," in which all the processes of using the simple bandage or roller are detailed; 2. the "*Composition and Application of the Compound Bandage, or the Bandage Proper*;" and 3. "*Mayor's Handkerchief System.*" Part third is devoted to a detail of "*Apparatus for Fractures and Dislocations;*" and here are furnished to the student all the various inventions and modifications of bandages and apparatus, more especially by the American Surgeons, Physic, Dorsey, Gibson, Barton, Coates, Hartshorn, and N. R. Smith. Part fourth comprises the "*Minor Surgical Operations*," such as phlebotomy, arteriotomy, leeching, cupping, blistering, setons, issues, moxa, vaccination, injections, and tooth-drawing.

ART. XII.—*A Treatise on Protracted Indigestion and its Consequences; being the Application to the Practical Department of Medicine of the Results of an Inquiry into the Laws of the Vital Functions, etc.* By A. P. W. PHILIP, M. D., F. R. S., London and Edinburgh, etc. Philadelphia: Lea & Blanchard. 1843. 8vo. pp. 240.

THIS work, the author, on his retirement from the medical profession addressed both to the members of that profession, and to the well educated public, particularly parents: and here we find a man, who once enjoyed an enviable professional reputation, descending in his old age, to the unprofessional act of making an appeal to the "intelligent public," from the decision of his equals. Notwithstanding his

favorite theories have died away as regards the profession, there is a tone of self-satisfaction manifested throughout the book that is truly surprising. As an evidence of his capability for the execution of the complicated labor before us, he refers to the circumstances that he had an extensive experience of between thirty and forty years in the practice of medicine, and that he had devoted, during the same time, much study to the investigation of the laws of our frame, as appears from the fact of his having presented twelve papers to the Royal Society of London, "and published in the Philosophical Transactions, between the beginning of the year 1815, and the end of 1836, four editions of my Inquiry into the Laws of the Vital Functions, and seven editions of my Treatise on Indigestion." But all this merely proves that he has outlived his theories.

Every practitioner of any experience will at once perceive that the following observations refer to a class of obscure affections, which invariably baffle the efforts of the most skilful.

All medical men of any standing must have seen instances in which, after long-continued and severe suffering, death has rapidly ensued, to their own surprise, as well as that of the friends of the sufferer, without their being able to explain satisfactorily why symptoms, which do not usually indicate such immediate danger, were the only symptoms which immediately preceded the fatal termination. From what is stated in this volume, I trust it will appear in what manner this and other evils which I shall have occasion to point out, may be referred to the physiological errors at present influencing the practical department of our profession, and by what means these evils may be corrected.

What are commonly called bilious complaints, as well as all other morbid states affecting the brain and spinal marrow, are, strictly speaking, constitutional affections, which, in their various and more severe forms, often degenerate into some of the most fatal diseases to which we are subject; and which are rendered doubly dangerous, as will appear from the relation which subsists between the different stages of such cases, from mistaken views which have arisen respecting some of the most influential laws of our frame.

As the object of this publication is to explain the nature and check the great fatality of such cases, both these subjects are more fully considered in the following pages than in any other of my publications; and as it is necessary for these purposes to enter more fully into the inferences from my physiological investigations than I had previously done, it is on this account that the present volume is addressed to the members of the medical profession, as well as to the public.

The first and only public attempt I have made to enter on the whole of the practical part of the subject was in the fourth edition of my Inquiry into the Laws of the Vital Functions, published in 1839; for although I had been long acquainted with the physiological facts, it was not till within the last ten or twelve years that I saw the whole of their bearing on the practical department of our profession, and consequently still later before I had that direct practical proof of the accuracy of my inferences which I considered necessary to entitle me to lay the results before the public. In the present treatise I have been enabled to enter on them much more fully than in that just mentioned, both from additional experience and reflection, and because the object of the present publication is wholly of a practical nature.

In the preface and first part of the work, the author endeavors to show that certain physiological errors prevail in the profession, which are the great obstacles to the universal adoption of his views; and in the second part, he dwells at length upon the nature and tendencies of indigestion. We deem it unnecessary to enter into the peculiarities of

his pathological views; but, however much we may disagree with the author in his doctrines, we cannot but regard his results, in a practical point of view, as valuable.

There is scarcely any disease upon which our knowledge is less precise than that of indigestion, in its various modifications and complications; and to him who may succeed in throwing a single ray of light upon these obscure points of pathology and therapeutics, the glories of immortality are justly due.

ART. XIII.—*Elements of Chemistry, including the Applications of the Science in the Arts. With numerous illustrations.* By THOMAS GRAHAM, F. R. S. L. and E. D., Prof. of Chemistry in University College, London; President of the Chemical Society; Corresponding Member of the Royal Academy of Science of Berlin and Munich, &c. With Notes and additions by ROBERT BRIDGES, M. D., Prof. of General and Pharmaceutical Chemistry, in the Philadelphia College of Pharmacy, and one of the Editors of the American Journal of Pharmacy. Philadelphia: Lea & Blanchard. 1843. 8vo. pp. 749.

WE congratulate the student of chemistry in having thus presented to him another exposition of chemical science—one equal to any of its brotherhood. We do not of course propose to give an analysis of an elementary work; but, in saying that the talents of the author are of a high order, that his style is comprehensive, that his facts are judiciously arranged, and that the work fully represents the progress of the science up to the date of its publication, we think that we have said all that words can express in favor of a book.

The following extract will serve to show its general arrangement:

The important bearings of the laws of heat, particularly in reference to the physical condition of matter, have led to their consideration before the chemical properties of substances, in this as in most other elementary treatises on chemistry. Light is then shortly considered, chiefly in reference to its chemical relations. The principles of its Nomenclature, in which, compared with many sciences, chemistry has been highly fortunate, are then explained, together with the Symbolical Notation in use, by means of which the composition of highly compound bodies is expressed with the same palpable distinctness, which in arithmetic attends the use of figures, in place of words, for the expression of numerical sums.

A considerable section of the work is then devoted to the consideration of the fundamental doctrines of chemistry, under the heads of Combining Proportions, Atomic Theory, Doctrine of Volumes, Isomorphism, Isomerism, Constitution of Salts, and Chemical Affinity, including the propagation of this action through metallic and saline media, in the voltaic circle.

The materials of the Inorganic world are then described, under the two divisions of non-metallic elements and their compounds, and metallic elements and their compounds.

Lastly, the numerous compounds of the Organic world are discussed. In this department, a most extraordinary progress has been made within a very short period. The study of organic chemisty has also been much facilitated by classification, and the arrangement under compound Radicals, introduced by M. Liebig.

It was now obvious that the science was sufficiently advanced to be applied to the elucidation of the great questions of vegetable and animal physiology. A condensed view is given of the new discoveries in the former department, and also of the important conclusions respecting the animal functions of respiration and digestion, results which are entirely new, and now enter for the first time into a systematic work on Chemistry.

ART. XIV.—*The Retrospect of Practical Medicine and Surgery, being a half-yearly Journal, containing a retrospective view of every discovery and practical improvement in the Medical Sciences.* Edited by W. BRAITHWAITE, Surgeon to the Leeds General Eye and Ear Infirmary, etc.

THIS periodical, which is re-published in this city by Adee & Eastabrook, consists of extracts and analyses from the different medical journals published in Europe and America. As regards the estimation in which we hold it, it is sufficient to say that our department of "Foreign Medical Intelligence" is seldom without an extract from its pages.

ART. XV.—*An Introductory Address to the Students of Castleton Medical College, at the commencement of a course of Lectures on Opthalmic Anatomy and Surgery, for* 1843. By ALFRED C. POST, M. D.

THIS address, published by the class, dwells upon the importance of medicine as a science, and urges upon the student the value of the collateral branches of human knowledge, such as botany and geology, mathematics, logic, and rhetoric, with moral and intellectual philosophy, as well as an acquaintance with ancient and modern languages. In regard to the attendance on public lectures, Dr. Post says:

It would appear almost unnecessary to speak of the advantages of this mode of receiving instruction, as they are so generally acknowledged. But as there are some individuals who are disposed to decry public lectures, and to detract from their importance in a system of medical education, it seems to me proper to enumerate some of their advantages. In the first place, oral instruction excites a far higher interest in the minds of the students than can ordinarily be created by the perusal of books. Information communicated in this manner, makes a deep impression on the mind, and strongly fixes itself upon the memory. Secondly, a lecturer saves his hearers a large amount of time and labor, and brings before them, in a short time, the accumulated results of long-continued and laborious investigations. Thirdly, a lecturer is enabled to combine demonstration with his instructions, and thus to address himself not only to the ear, but also to the eye, and frequently to some of the other senses. Entertainment is in this manner connected with the acquisition of knowledge; the study becomes attractive, and a desire for improvement is awakened in the

mind. Fourthly, a lecturer is able, by familiar and varied illustrations, to present his subject in such a light that it can readily be seen in all its most important bearings, while it would be extremely difficult to convey a clear idea of the same by any written discourse. So fully sensibly are the most enlightened governments of the advantages accruing from lectures on the different branches of medical science, that an attendance on such lectures is required by law as a necessary step in order to the attainment of the highest honors and privileges of the profession. But notwithstanding the importance of this mode of communicating and receiving instruction, it ought not to be relied on to the exclusion of the other methods which have been alluded to. A person who derives his professional knowledge entirely from lectures, is apt to be superficial and contracted in his views; he is incapable, in general, of making a correct practical application of the knowledge which he possesses; and he is exceedingly prone to follow the opinions of others without testing their truth or falsehood. He is, in fact, "addictus jurare in verba magistri." It is of the highest importance, then, that private reading and reflection should accompany the attendance upon public lectures. By this means, erroneous impressions are corrected, and the mind is enabled to dwell on subjects which are obscure and difficult of comprehension, until, by continued attention, the obscurity is removed, and the difficulty is overcome. By this means also, the student is enabled to take a comprehensive survey of the opinions of different writers, and of the numerous facts which are recorded to illustrate their several views; and thus his mind is enlarged and his judgment matured, and he is prepared, with more energy and with better prospects of success, to enter upon the path of original investigation.

PART THIRD.

1.

Foreign Medical Intelligence.

ANATOMY AND PHYSIOLOGY.

1. *On the Cause of Erect Vision from an inverted Image on the Retina.*—Many solutions of it have been attempted; but they are for the most part rather specious than really satisfactory. That which has been of late years the most in vogue, is founded upon what was styled the Law of Visible Direction, which has been supported by Sir D. Brewster, and other eminent philosophers. This law affirms, that every object is seen in the direction of the perpendicular to that point of the retina on which its image is formed; or, in other words, that, as all the perpendiculars to the several points of the inner surface of a sphere meet in the centre, the line of direction of any object is identical with the prolonged radius of the sphere, drawn from the point at which its image is made upon the retina. Upon close examination, however, it is found that this law cannot be optically correct, since the lines of direction cross each other at a point much anterior to the centre of the globe, as may be determined by drawing a diagram upon a large scale, and laying down the course of the rays received by the eye, according to the curvatures and refractive powers of its different parts. In this manner it has been determined by Volkmann, that the lines of direction cross each other in a point a little behind the crystalline lines; and that they will thus fall at such different angles on different points of the retina, that no general law can be laid down respecting them. It may be questioned, moreover, whether any such law would afford any assistance in explaining the phenomenon, since, after all, it is requisite to assume an intuitive application of it, in supposing the mind to derive its ideas of the relative situations of objects from the supposed line of direction. A much simpler and more direct explanation may be given. We must remember that which we have had occasion to notice in regard to all the other senses—the broad line of distinction between the sensation and the perception or elementary notion; and this is still more clearly shown by the complete absence of any relation but such as experience develops, between the perceptions derived through the sight, and those acquired from the touch. Hence there is no more difficulty in understanding that an inverted picture upon the retina should convey to us a notion of the external world, which harmonizes with that acquired through the sense of touch, than there is in comprehending the formation of any of those intuitive perceptions of animals, which are so much more removed from the teachings of our own experience. It is justly remarked by Müller, that, "if we do see objects inverted, [or rather, if the picture on the retina is inverted,] the only proof we can possibly have of it is that afforded by the study of the laws of Optics; and, if everything is seen reversed, the relative position of the objects remains unchanged. Hence it is, also, that no discordance arises between the sensations of inverted vision and those of touch, which perceives everything in its erect position; for the images of all objects, even of our own limbs, on the retina, are equally inverted, and therefore maintain the same relative position. Even the image of our hand, when used in touch, is inverted." From what has been stated, it would appear quite conceivable, that a person just endowed with sight, should not at first know by his visual powers whether a pyramid placed before his eyes is the same body, and in the same position, as one with which he has become acquainted by the touch, and if this be admitted,

the inference necessarily follows, that the notion of *erectness*, which we form by the combined use of our eyes and our hands, is really the product of experience in ourselves, whilst it is probably innate or intuitional in the lower animals.—*Carpenter's Principles of Human Physiology.*

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2.—*Stammering in its relations with articulate sounds.*—Great as is the number of muscles employed in the production of definite vocal sounds, the number is much greater for those of articulate language; and the varieties of combination which we are continually forming unconsciously to ourselves, would not be suspected without a minute analysis of the separate actions. Thus, in uttering the explosive sounds, we check the passage of air through the posterior nares, in the very act of articulating the letter; and yet this important movement commonly passes unobserved. We must regard the power of forming the several articulate sounds which have been adverted to, and their simple combinations, as so far resulting from intuition, that it can in general be more readily acquired by early practice than other actions of the same complexity; so that we may consider these movements as having somewhat of the same consensual character as that which has been attributed to the purely vocalising actions. But there is in many individuals a deficiency of the power of rightly combining them, from which stammering and other imperfections result. Many theories regarding the nature of stammering have been proposed; and there can be little doubt that the impediment may be attributed to a great variety of exciting causes. A disordered action of the nervous centres must, however, be regarded as the proximate cause; though this may be (to use the language of Dr. M. Hall) either of *centric* or of *excentric* origin—that is, may result from a morbid condition of the ganglionic centre, or from an undue excitement conveyed through its afferent nerves. When of centric origin (and this is probably the most general case) the phenomena of stammering and chorea have a close analogy to each other; in fact, stammering is frequently one of the modes in which the disordered condition of the nervous system in chorea manifests itself. It is in the pronunciation of the consonants of the explosive class, that the stammerer experiences the greatest difficulty. The total interruption to the breath which they occasion frequently becomes quite spasmodic; and the whole frame is thrown into the most distressing semi-convulsive movement, until relieved by expiration.* In the pronunciation of the continuous consonants of the first class, the stammerer usually prolongs them, by a spasmodic continuance of the same action; and there is, in consequence, an impeded, but not a suspended respiration. The same is the case with the *l* and *r* in the second class. In pronouncing the *m* and *n*, on the other hand, as well as the aspirates and vowels, it is sometimes observed that the stammerer prolongs the sound by a full and exhausting expiration. In all these cases, then, it seems as if the muscular sense, resulting from each particular combination of actions, became the stimulus to the involuntary prolongation of that action. In some instances it is possible that the defect may result from malformation of the parts about the fauces, producing an abnormal stimulus of this kind in some particular positions of the organ; and such cases *may* be really benefitted by an operation for the removal of these parts. But the effect of the operation is evidently for the most part upon the nervous system; and it coincides with what may be frequently observed, that the stammering is increased under any unusual excitement, especially of the emotional kind.

The method proposed by Dr. Arnott for the prevention of stammering, consists in the connexion of all the words by a vocal intonation, in such a manner that there shall never be an entire stoppage of the breath. It is justly remarked by Müller, however, that this plan may afford some benefit, but cannot do every thing, since the main impediment occurs in the middle of words them-

* By Dr. Arnott this interruption is represented as taking place in the larynx; that this is not the case, a little attention to the ordinary phenomena of voice will satisfactorily prove.

selves. One important remedial means, on which too much stress cannot be laid, is to study carefully the mechanism of the articulation of the difficult letters, and to practise their pronunciation repeatedly, slowly, and analytically. The patient would at first do well to practise sentences, from which the explosive consonants are omitted, and his chief difficulty, arising from the spasmodic suspension of the expiratory movement, would be thus avoided. Having mastered these, he may pass on to others in which the difficult letters are sparingly introduced, and finally accustom himself to the use of ordinary language. One of the chief points to be aimed at, is to make the patient feel that he has command over his muscles of articulation; and this is best done by gradually leading him from that which he finds he *can* do, to that which he fears he cannot. The fact that stammering people are able to *sing* their words better than to *speak* them, has been usually explained on the supposition that, in singing, the glottis is kept open, so that there is less liability to spasmodic action; if, however, as here maintained, the spasmodic action is not in the larynx, but in the velum palati and the muscles of articulation, the difference must be due to the direction of the attention rather to the muscles of the larynx than to those of the mouth. Every one must have noticed how much the impediment of stammerers is increased when they are particularly anxious to speak fluently.—*Carpenter's Principles of Human Physiology.*

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3.—*On the Movements of the Heart.*—By M. Monod.—M. Monod had an excellent opportunity of examining the movements of the heart in an infant, which was born with thoracic ectopia, the parietes of the thorax being deficient, and the heart being visible to the eye. The pericardium also was wanting. The child lived 14 hours, but during this time many important facts were ascertained.

The contractions of the ventricles of the heart did not take place over its whole surface at the same moment, but progressed from the base to the apex; at the same time the organ became of a pale color, its surface wrinkled, a movement of twisting from right to left was observed, and lastly, the apex of the heart was carried upwards and forwards.

The diastole presented the same phenomena, but in an opposite order. The heart relaxed suddenly; then the ventricular cavity became filled with blood, swelled out, became elongated, and the apex was projected downwards. If the total duration of these two movements were divided into four equal spaces of time, it would be seen that the systole occupied three of these, the diastole only one.

The contractions of the auricles commenced in their free appendices; but in them the duration of the contraction and relaxation were in the inverse ratio of those of the auricles. The systole, or contractions, occupied only one-fourth of time, the diastole, or relaxation, three-fourths.

With regard to the order of the succession of movements, both ventricles contract at the same time, and both relax together; it is the same with the auricles. There are two periods of repose; one, which is the shortest, is between the first and second sound; the other, which is the longest, between the second sound and the first.

In this case the maximum of intensity of the first sound did not occur at the base of the ventricles, but at the middle of their fleshy walls; and M. Monod thinks that it was caused by the shock of the walls of the ventricles against the internal fleshy columns at the moment of contraction. As to the second sound, he thinks it was due to the return of the wave of blood against the sigmoid valves.—*Ed. Med. and Surg. Jour.*

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4.—*Animalculæ in the Blood.*—The occasional existence of worms in tho blood of a living animal, is a phenomenon that must excite the curiosity ef pvery one. The allusions to such an occurrence in the writings of the old ehysicians are so imperfect and confused, that it is difficult to determine what

amount of credit we can attach to them. If the observations of Welsch* and Polisius† on worms found within the heart of the human subject are not to be received as authentic, these authors having probably mistaken fibrinous concretions of the blood for actual worms, recent researches, however, have clearly shown that such entozoa do really sometimes exist in the hearts of some of the lower animals. M. Barkow‡ found in the right ventricle of a species of heron (*Ardea Cinerea*) two nematoids, which are now preserved in the museum at Greifswald; and M. Baer§ has discovered a peculiar species of the distoma (*d. duplicatum*) in the hearts of several Molluscous animals.

It is well known that a particular kind of worm (*Strongylus armatus minor*) is occasionally developed in the fibrinous concretions that form in aneurismatic arteries of Solipedous animals. The veins, too, of certain animals are not exempt from these entozoa. Treutler‖ found a species of *fasciola* in the pulmonary veins of a seal: and another kind of worm in the vena cava of a deer. Numerous authors have subsequently studied the particular species of *Strongyli*, that are occasionally met with in the venous sinuses at the base of the cranium, and also in the pulmonary veins of the *Delphinus Phocæna*. Schmitz, while observing the circulation in the mesentery of a frog, happened to observe the appearance of living animalcules existing in the blood. To ascertain if this was of frequent occurrence, he examined the blood of 53 lizards, and of 81 frogs, but without success. At length, however, in a frog, he again discovered in the blood animalcules similar to those which he had seen in the first instance. He observed that they made their way through the parietes of the vessels, and then burst and discharged the granular matter which their bodies appeared to contain—a phenomenon that has been repeatedly witnessed in certain *Polygastric* animalcules, &c. It is the opinion of M. Valentin that these blood entozoa, described by Schmitz, most nearly resemble the *Polystoma venarum* of which Treutler has given so minute an account.

M. Valentin himself has repeatedly found in the blood-vessels of frogs the *Anguilula intestinalis*. His idea is, that these animalcules are hurried along in the torrent of the circulation till they, as it were instinctively, stop in some organ that is best suited as a domicile for them; and that they then work their way through the parietes of the vessels. This author also mentions that a *Strongylus armatus* was recently discovered in the blood from the venæ cavæ of a horse; there was no trace of an opening in the walls of the vessel, or of any communication between it and the intestinal canal.

Dr. Vogt, while examining with a microscope the membrana nictitans of a frog, was surprised to find that the vessels, still filled with blood, contained numerous living animalcules, which moved about with great vivacity: similar animalcules were observed in the blood-vessels of other parts of the body. On inspecting the abdominal cavity of the animal, he observed several brown-coloured saccules, similar to those in which M. Valentin has occasionally met with *filariæ*. As he believed that these minute worms are the embryos of entozoa, he examined these saccules with great attention; but they were all quite empty.

In other frogs, however, in which these abdominal saccules existed, he found that many of them contained a *filaria*—the resemblance between which and the animalcules of the blood is very marked.

Valentin has recently described, in a letter addressed to Müller, some very curious phenomena which he observed in the blood taken from the abdominal aorta of a trout. On first examining it, he noticed a number of dark-coloured globules mixed with the globules of the blood; they were in rapid movement, without, however, changing their place. After the lapse of a short time, I was surprised, says he, to perceive first on the side of these globules a sort of

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* Disput. de Verme Cordis. Lips. 1694.
† Observ. de verm: in corde repert: (Ephem. Nat. Cur.)
‡ Observationes de Entozois. 1825.
§ Novæ Obs. de Entozois. 1829.
‖ Observ. Anatomicæ-Pathol: de Helminthologiâ. 1793.

transparent appendage, or tail; and subsequently that there was evolved an animalcule of an elongated shape, and which was continually in rapid motion round its own axis. This animalcule belongs probably to the old genus *Proteus*, or what Ehrenberg has called *Amœba*. Its length did not exceed from a 3 to a 5,000th part of an inch. Sometimes as many as ten, and even more, could be counted in a single drop of the blood; but in no other part of the body could they be discovered. The only other entozoa that were found were several ascarides in the pyloric appendages.

M. Gluge of Brussels, has subsequently communicated to Müller's archives a description of an animalcule, which seems to be very similar to those mentioned in the preceding notice, and which he accidentally met with in the blood of a frog.

It seems, therefore, that the existence of entozoa in the blood of certain animals is by no means of very rare occurrence. As yet we know nothing of the manner in which they become developed; but further investigation of the subject may throw light on this very curious subject.—*Archives de Medicine Comparée*,* No. 1, Oct. 1842, from *Medico-Chirurgical Review*.

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5.—*Andral on Carbonic Acid exhaled during Respiration.*—The conclusions with which this accomplished *physiological*—not in the sense of the Broussaian School—physician sums up a long memoir which he recently read on the above subject, at the Royal Academy of Medicine, are the following:—

1. The quantity of carbonic acid exhaled from the lungs in a given space of time, varies with the age, the sex, and the constitution of the individual.

2. In the male, as in the female sex, the quantity is found to vary according to the age, independently of the bulk or weight of the person on whom the experiment is made.

3. At every period of life, between the eighth year and the most advanced age, a marked difference is observed in the quantity of the carbonic acid exhaled in the male, from what is found to be exhaled by the female. It is, *cæteris paribus*, always much more considerable in the former than in the latter. This difference is especially remarkable between the 16th and 40th years of age—a period during which the male very generally exhales almost twice as much as the female.

4. In the male, the quantity exhaled goes on steadily increasing from eight to thirty years of age. This increase is greatest at the period of puberty. After the 30th year, the proportion exhaled begins to decrease; the amount of decrease becoming more and more considerable in advanced age, so that in the latest period of life, it is nearly about the same as it was in early youth.

5. In the female, the exhalation increases according to the same law as in the male, during the period of childhood. But at the time of puberty, when the menstrual function begins to be developed, the increase—contrary to what occurs in the other sex—is suddenly arrested, and remains stationary (at nearly what it was in infancy) as long as this function continues in its integrity. When it begins to cease, the exhalation of carbonic acid from the lungs increases in a very remarkable degree. As the woman, however, advances to old age, it again decreases, and ultimately it becomes, as in the male sex, very small.

6. During the whole period of pregnancy, the exhalation is for the time increased to what is usually in women "parvenues a l'epoque de retour."

7. In both sexes, and at all periods of life, the amount of the exhalation is proportionally greater in persons of a robust constitution and of a muscular frame. Whenever the energies of the system are reduced from disease or otherwise, the quantity of carbonic acid exhaled from the lungs is found to be diminished.

* (This is the first number of a new journal recently started in Paris under the immediate management of M. *Rayer*. It promises to be of great interest; the study of comparative pathology has hitherto been far too much neglected.—*Rev.*)

In conclusion, M. *Andral* remarked that the variations described above do not depend, as one might *à priori* imagine, on differences in the mere capacity of the thorax; although, as a matter of course, they are a good deal influenced by this cause.—*Encyclographie des Sciences Medicales*, from *ibid.*

PRACTICAL MEDICINE.

6. *Hæmaturia.*—The young practitioner is frequently at a loss to account for cases of bleeding from the urethra, and he may not be able at once to remember the opinions of standard authors on the subject. He may not know where the blood comes from, whether from the bladder, the urethra, the ureters, the prostate, or the kidneys; and his ignorance on this point will necessarily involve indecision in his treatment. One of the simplest means of knowing whether or not it be real blood which tinges the urine is to gradually boil the liquid. If it contain blood, a greyish-brown flocculent precipitate, consisting of coagulated albumen tinged with the coloring matter of the blood, will form and gradually subside, leaving the supernatant liquid clear and of its natural tint. Dr. Prout states that "when blood is derived from the kidney, it is in general equally diffused throughout the whole urine: on the contrary, when derived from the bladder, the blood for the most part comes away in greater or less quantity at the termination of the discharge, the urine having previously flowed off nearly pure." When the blood proceeds from the urethra, it will generally come away *guttatim*, or in a stream unmixed with urine, and neither preceded nor accompanied by any desire to make water. But there are many cases where it is almost impossible, from the absence of pain, &c., to fix upon the part whence the blood arises, and in these doubtful cases it will probably be found that the kidneys are the organs giving rise to it, from the existence of earthy concretions, which we know may form in the kidneys in great numbers, and to a considerable size, without furnishing any signal, except that of hæmaturia, which may lead us to suspect any mischief.

The *treatment* of hæmaturia must be exceedingly various. When the bladder is so distended that complete retention of urine takes place, recourse must be had to a large eye catheter and an exhausting syringe, by the aid of which, and the occasional injection of cold water, the coagula may be broken down and removed. If the hæmorrhage returns, injecting cold water into the rectum or bladder, and, if necessary, from twenty to forty grains of alum in each pint of water may be used. Dr. Prout says this seldom fails, even when the cause is malignant disease. Among internal remedies, *Ruspini's styptic*, recommended by Sir Benjamin Brodie in his published lectures, is no doubt a valuable medicine. Dr. A. T. Thompson says this consists in a solution of *gallic acid* in alcohol diluted with rose water. The French are very fond of the extract of *rhatany* root, the *krameria* of our Pharmacopœia. Dr. Watson gave this to a female in scruple doses three times a day, and the hæmaturia ceased after the first dose, although the affection had resisted treatment for some weeks. *Gallic acid* enters into the composition of this vegetable extract, and it is worthy of notice, that gallic acid is one of those substances, which, when introduced through the digestive organs into the blood, passes through the round of the circulation unchanged, and reappears in the urine: it is therefore proved to be a most useful astringent in more cases of hæmorrhage than those which arise from the urinary organs. The styptic virtues of the uva ursi, bistort, tormentil, pomegranate, kino, catechu, and the several preparations of gall-nuts, may likewise depend on the same principle, or rather, probably, on the *tannin*, as this exists in much greater proportions than gallic acid in most of these substances, although the medicinal effects are alike. In one hundred parts of rhatany root, Gmelin found thirty-eight parts of tannin, and Peschier forty-two parts. Hence we find its value, not only in internal hæmorrhage, but also in profuse mucous discharges, passive hæmorrhages, as metorrhagia, and in relaxation and debility of the solids. But in those mucous discharges which proceed

from chronic affections of the urinary organs, we shall find that uva ursi and pareira brava are the two most valuable of our medicines. When combined with hyosciamus and persevered in for a *considerable time*, Dr. Prout says the uva ursi is of the greatest use: on the other hand, Sir Benjamin Brodie places much more confidence in pareira brava, which he uses with the greatest benefit in cases of "*discharges from the urino-genital mucous membranes*;" in chronic inflammation of the bladder especially, Sir B. Brodie thinks it has the greatest influence, "lessening very materially the secretion of the ropy mucus, and diminishing the inflammation and irritability of the bladder also." He gives it in the form of a concentrated decoction with tinct. hyosciam., and where there is a deposit of the triple phosphates, he accompanies it with the muriatic or diluted nitric acid. His formula is, half an ounce of the root in three pints of water, boiled down by gentle simmering to one pint: of this eight or twelve ounces may be taken daily.

While on this subject we will refer to the papers of Dr. Walker, of Huddersfield, and Mr. Soden, of Bath, who have found such an excellent effect in some affections of the bladder from a combination of benzoic acid and copaiba, which succeeded in some cases where the uva ursi and pareira brava had failed. Our readers will remember the interesting article we published in Retrospect No. IV., by Dr. Ure, on *hippuric acid*, which is formed in the system by the exhibition of benzoic acid. When benzoic acid or a soluble benzoic salt is taken, it changes the uric acid of the urine into this hippuric acid; and it has been discovered that the hippurates of soda, ammonia and potash, are much more soluble than the salts which uric acid forms; hence in some states of the urine the formation of hippuric acid as a substitute for the uric acid is of the greatest consequence, and considerably facilitates the cure. When the benzoic acid is combined with copaiba, it has been found both by Dr. Walker and Mr. Soden to be superior to the uva ursi and pareira brava in many cases of great irritability of the bladder accompanied with muco-purulent discharge. A drachm of benzoic acid, with half an ounce of balsam of copaiba, made into an eight-ounce mixture with the yolk of an egg, will be found an excellent remedy. Two table-spoonfuls may be given three times a day.—*Braithwaite's Retrospect.*

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7. *On Electro-puncture in the Treatment of Deafness, depending on a Paralysis of the Acoustic Nerve.* By M. Jobert.—The paralysis of the acoustic nerve may be produced by exposure to a current of air, to too great a shock of the head, to waves of sound too violent, to affections of the teeth or of the gums. Electro-puncture has been already employed in these cases, but it had fallen into disrepute. The author believes that he uses it in a manner more direct and more rational; here is his proceeding:—Stard's sound, he says, is introduced through the nasal fossa into the Eustachian tube, and in this sound a long thin acupuncture needle is inserted, so as to fix itself in a point of the parietes of the Eustachian tube, while the other end projects from the end of the sound; another acupuncture needle is implanted in the membrane of the tympanum. This being done, one of the conducting wires of a galvanic battery, of which the trough is filled with water and muriatic acid, is passed through the eye of one of the needles, and the end of the other conducting wire is made to touch the opposite needle. I have used, in the beginning, eight pairs of the battery, then I got to ten, to twelve pairs; finally I have been as high as eighteen, and at present I have patients who have undergone several sittings, and on whom I have acted with the entire pile, the trough of which contains forty metallic pairs. At the moment that the two poles are put into contact, there is a very painful shock in the ear and in the head, with convulsive motions; but this shock and this pain cease immediately. In a single patient the impression was felt during eight days, but it never extended beyond a slight pain, which ceased of itself. It must be added, that the patients who were submitted to electricity in this manner, were, during some moments, as if stunned, and preserved some time after the experiment a bewildered look.

The sitting was usually confined to a single shock when the patients were irritable; I have given two and even three shocks in people whose sensibility was obtuse, and who have been already submitted to electro-puncture. In general I allow eight days to pass between each trial. The author then relates four cases of well marked deafness, and in which the cure was complete; in the first after a single shock, in the second after two shocks, and in the third after two sittings, each composed of three galvanic shocks.—*Dub. Jour. Med. Science*, from *L'Examinateur Medicale.*

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8. *On Solution of Gum Arabic in Scalds and Burns.* By Wm. Rhind, Esq., Edinburgh.—Among the various ingenious methods of protecting the injured surface from the contact of the atmosphere, in cases of scalds and burns, the application of a solution of gum arabic, from its simplicity and readiness of application, is worthy of notice. It is, perhaps, not so readily and universally obtained as the solution of common soap, used by Dr. Williamson, or the treacle and water, used by Mr. Buller; yet when it can be readily and quickly obtained, it will no doubt prove equally serviceable. When the skin is not destroyed, the parts are to be repeatedly smeared over with a solution; as often as one layer is dry, another is to be applied—and this may be repeated several times. Mr. Rhind says, in those distressing cases of the extensive burning of the bodies of young children, I would not hesitate applying the solution over the whole body, at about the warmth of 96°. It does not cool down the system by sudden evaporation or sudden abstraction of heat, like a common cold fluid—a circumstance in most cases to be dreaded—for gum is a bad conductor of heat; neither does it preclude an exposure to moderately cool air, which seems to keep down the excessive irritation consequent upon extensive scalding of the skin.

As it is of consequence to have the solution prepared instantly, the powdered gum, if it can be procured, may be in a few minutes dissolved in warm water. If this is not ready prepared, the common gum, in small particles, roughly pounded, will very soon dissolve, and the application in any case may be applied at a temperature of 96° or 100°, although in general it is more soothing when applied colder. Rancid gum solution should not be used, as in this state it has lost its adhesive quality. Two, three, or four applications may be necessary, at intervals of five or ten minutes. The skin should be previously freed of all oily matters, and the first coating, in order that it may be insinuated closely into the furrowed surfaces of the skin, should be rather thinner than the subsequent ones. In order to produce the proper effect, it should form a varnished coat of some thickness and closeness over the whole space of the burnt part.

With regard to the *modus operandi* of this substance, I am as much in the dark as we usually are with the mode of action of most other well-known remedies. I am unable to say whether it has a specific action, or whether it allays the inflammable irritation of the skin, by effectually excluding the external air, and by its being a bad conductor of heat.

The first proposition might be so far tested by trying if other gums and mucilages, or isinglass, for example, produced a similar effect. This I have not tried.

From some experiments, which, however, were never completed, that I instituted some years ago, regarding the influence of oxygen on inflamed tissues and vessels, I am inclined to think that the exclusion of atmospheric air influences very much inflammatory action, and in this way, perhaps, the gum solution checks the inflammation of the skin in burns. Inflammation caused by touching the skin with nitrous acid and other irritants, appears to be suddenly allayed by a solution of gum arabic; erysipelatous spots on the skin seemed also in some trials influenced by this application. And I may here suggest that it might be tried in the first stages of the pustules of small-pox, especially those of the face, with a view to modify their development, and prevent pitting.—*Braithwaite's Retrospect.*

We can add, from experimental knowledge, that starch, wheat, or rye-flour,

&c., answer the same purpose in cases in which the cuticle has been merely raised, and that the application is always attended with the most happy results.

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9. *A Cause of Phlebitis following Venesection.*—Dr. Sandri is of opinion that phlebitis consecutive to venesection, is sometimes occasioned by the oil which is used for the whetstone on which the lancets are sharpened. He thinks that this becomes rancid or acid from being kept for a length of time in a loosely stopped phial, and that it may form a poisonous compound by combination either with the oxide of iron of the lancet, or with the alkaline or earthy bases of the stone. On applying a small quantity of it to a slight ulceration it caused some considerable inflammation; and a dog was poisoned by being made to swallow a drachm of it; he likewise charged a lancet with it and bled a healthy young man in whose arm a tumor was raised and suppurated during six days. —*Annali Universali di Medicina.*

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10.—*Leucorrhœa cured by Iodine.*—M. Ch. Van Steenkiste has published the details of two cases of leucorrhœa treated with iodine injections, in the "Annales de la Societe Medico-Chirurgicale de Bruges." The first case in which he tried it was that of a seamstress, twenty-two years of age, of a scrofulous constitution, who had labored under leucorrhœa three years. The discharge was thick and abundant, and of a milky or slightly yellow colour. The patient presented all the symptoms of anæmia; the mucous membrane of the vagina was very pale, the cervix uteri red and tumefied. The genitals were excoriated. An injection, containing four scruples of iodine, sixty of alcohol at 25°, and 125 of common water was ordered for her, of which about thirty scruples were thrown up into the vagina. Heat and irritation were immediately experienced in the parts, and the discharge ceased entirely for three hours, returning then in larger quantity than ever, accompanied for a few minutes with very severe pain in the genitals, headache, and general spasms. These symptoms soon disappeared, and the discharge did not again return till the next day, when the same quantity of iodine was injected, less severe symptoms following its use. The catamenial secretion, which had been absent seven months, appeared towards evening, and continued for three consecutive days, unaccompanied by any other discharge. On its cessation, the leucorrhœa again showed itself, but in less quantity than before. M. Steenkiste, desirous of retaining the iodine more in contact with the vaginal mucous membrane than it had been previously, introduced a speculum, with the assistance of which he filled the vagina with five pieces of charpie, soaked with the iodine, and left them there, intending to remove them in an hour's time. Four of these pledgets were expelled by pains which came on in the interval, and when the surgeon sought to withdraw the fifth he could not introduce the speculum, the vagina was so contracted. The cure thus induced has been permanent, and the catamenia have again appeared. The second case was equally satisfactory.—*Provincial Medical Journal, April* 22, 1843.

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11.—*A New kind of Pessary.*—Mr. Snow has invented a new kind of Pessary, which consists of a piece of sponge cut into the form of a sphere, and tied up, by means of small twine or silk thread, in a circular piece of oil-skin, in such a manner that a small stem or tail, about half or three-quarters of an inch long, is left. The firmer kinds of sponge are to be preferred, and the oiled silk ought to be closed as firmly as possible by tying.

On compressing this pessary, the air in the cells of the sponge is gradually forced out at the neck, between the folds of the oil-skin, when it can be very

readily introduced. When passed above the contracted part of the vagina, air soon re-enters the cells, and the instrument becomes expanded. The tail facilitates its removal at any time.

The advantages which Mr. Snow considers this pessary to possess, are:

1. Its capability of being diminished in size during its introduction and removal.

2. Its softness, which is such that it can scarcely cause any of the effects of a foreign body.

3. Its small weight.

4. The tendency of its elasticity to keep it in its position, for any sudden pressure of the viscera above will be spent in overcoming this elasticity, instead of forcing the instrument through the external parts, and such pressure will flatten it and make it wider, thus rendering its extrusion the less possible.

It also possesses the advantages of being cheap and durable.—*Med. Chir. Review, for July*, 1843.

SURGERY.

12. *Popliteal Aneurism cured by Pressure upon the Femoral Artery.*—In the May Number of the Dublin Journal of Medical Science, there are two cases of this disease cured by compression, reported. One case is by Edward Hutton, M. D., Surgeon to the Richmond Hospital, and the other is by Mr. Cusack. In the July Number, we find a third case reported by O'B. Bellingham, M. D., with observations; and of this last case, we propose presenting the leading features.

The tumor, which was about three inches in diameter, seated high in the popliteal space, had all the characteristics of a true aneurism. In consultation with Drs. Cusack and Hutton, it was determined to give a trial to pressure upon the artery above the tumor by means of Sir Philip Crampton's apparatus, which had been successfully employed in Mr. Cusack's case.

April 3d. The instrument was applied this day, the pad was placed upon the artery as it passes over the ramus of the pubis, and on the screw being tightened the pulsation in the aneurismal tumor ceased; in a minute or two it returned, and the screw was again tightened; this happened several times; in from five to ten minutes the limb presented a slight dusky color throughout; the patient complained of a feeling of cold in both lower extremities, which probably depended upon the exposure. After a short time the collateral circulation became evidently increased, and the vessels enlarged; the circumflex ilii and the epigastric artery could be felt beating strongly under the finger; the discoloration of the integuments ceased, but the entire limb appeared to be somewhat swollen. He began soon to complain of the pressure of the straps by which the apparatus had been secured above the pelvis, and I was obliged to loosen them. Subsequently it was found that the slightest movements of the patient were sufficient to disturb the pad, and thus remove the pressure from the artery. Although intelligent pupils remained beside him during the day and night, he could not bear sufficient pressure to stop the pulsation in the tumor for more than a few minutes at a time. The apparatus was consequently removed altogether the following morning; the skin at the part acted on by the pad had become red and painful; he felt also a sensation of numbness along the front of the thigh, the limb from the hip downwards was evidently larger than its fellow, and no impression appeared to have been made upon the aneurismal tumor.

The limb having recovered its natural appearance, the improved apparatus constructed by Mr. Millikin was applied on the 6th. The same phenomena followed the compression as were observed before; but at the end of about six hours, on changing his position to the affected side with the view to obtain some relief from pain, he was agreeably surprised to find that the pulsation in the

aneurism was checked, notwithstanding the pad did not completely obstruct the current of blood. Six hours afterward, on loosening the screw to replace the pad, he found that all pulsation in the tumor had ceased; and four hours subsequently, when he had a call to stool, he found, on removing the pad, that the pulsation had not returned.

At nine o'clock, A. M., April 7th, [being five hours after the period last referred to,] he was visited, up to which time he had continued the application of the same degree of pressure; and on loosening the screw completely, no pulsation could be detected in the tumor, which felt solid, smaller than before, and hard: the limb had recovered its natural temperature, the feeling of numbness had disappeared, and the swelling in a great measure subsided. He was directed to remain perfectly at rest, and to continue the gentle pressure as before, the amount of which he was allowed to regulate by his own feelings.

On the 11th, the apparatus was altogether removed, the pressure, since the 7th, having been merely sufficient to diminish the amount of the current of the blood through the femoral artery. The tumor was now "about the size of a *small orange*," having a solid, hard, and rounded feel.

The vessels which carry on the collateral circulation are enlarged; the pulsation of the articular arteries about the knee is evident to the eye; the pulsation in the femoral artery is lost from the lower edge of the opening of the triceps, above which it appears to preserve nearly its natural strength and fulness. It may be necessary to mention, that the patient was bled, and during the treatment was kept upon low diet. In order further to quiet the circulation, he was prescribed a mixture, containing a small quantity of the tinctures of digitalis and hyoscyamus.

On the 22d, the tumor was smaller and harder, having the "size and shape of a *small egg*." Quere—*a wren's egg?* The patient was not permitted to leave his bed for another month, during which period a combination of camphorated mercurial ointment and hydriodate of potass ointment, was rubbed upon the ham.

On the 15th of June, the tumor was very small, and the limb was free from all uneasiness.

It thus appears that but a period of eight hours of pressure was necessary to cause all pulsation in the aneurism to cease, on unscrewing the pad.

The instrument employed upon the present occasion consists of a hollow splint, well padded, and of sufficient size to receive the nates and upper part of the thigh of the side upon which we intend to make pressure, and sufficiently long to reach from the crest of the ileum behind to the middle of the thigh. From the upper and outer edge of this splint, a strong steel strap passes upwards, then inwards and downwards, over the anterior superior spinous process of the ileum, until it meets another steel strap from the lower and inner side of the splint, to which the latter is attached by a screw, which permits of its being shortened or lengthened; at the situation where the two steel straps meet, the lower is fitted with a slide and the upper has a hinge; in addition there is a sliding box, slow tourniquet screw, and pad, with a sliding bar to prevent lateral motion. To the upper and inner edge of the splint a strong spring is attached, which embraces the opposite side of the pelvis, and is continued into a soft strap which passes over the abdomen and secures it above; while below, a soft strap passes round the middle third of the thigh.

Since the time of Hunter, through whose surgical knowledge the treatment of aneurism has been so much simplified, the older method of cure by compression has had few advocates; but at that period, pressure was applied immediately upon the tumor, while the entire limb was at the same time compressed by means of a bandage; and the patient, in addition, was generally subjected

to Valsalva's treatment of perfect rest in the horizontal posture, very low diet, and frequent blood-letting. This mode of treatment, however, proved very tedious and painful, lasting many months; and besides, when it failed, as was not unusual, the increase of the aneurism subsequently was generally very rapid. It was, consequently, in a great measure, abandoned in aneurism of the larger arteries, while in aneurism of the smaller vessels, as the temporal and radial, and especially at the bend of the arm following blood-letting, it was still successfully employed.

"The application of pressure," says Mr. Bellingham, "to the vessel between the aneurism and the heart, with the view of either completely or partially obstructing the passage of blood through it, appears to be a much more recent practice. In the second volume of the Dict. des Sciences Medicales, Richerand has related perhaps the earliest case of the kind: it was that of a grocer in Paris, the subject of popliteal aneurism, who, by preserving the recumbent posture for twelve months, restricting himself to a low diet, with a bleeding once a month, and at the same time compressing the artery in the thigh by means of an instrument constructed on the same principle as a truss, was perfectly cured. In the third volume of the Lecons Orales, two cases of popliteal aneurism are related, in which compression was successfully employed at the Hotel Dieu by Dupuytren; in one the pulsation ceased in about three weeks; the apparatus employed was a semicircle of steel, with a concave cushion at one extremity, and a pad at the other, capable of being moved by a spring and screw; it is commonly known as Dupuytren's compressor. Dupuytren had recourse to pressure only, because the patient refused to submit to operation. He never appears to have employed this method subsequently; indeed he looked upon these two successful cases as the result of some happy chance which might occur once or twice in the course of a long practice, rather than as the effect of a proceeding worthy of being adopted and recommended; it being well known that in several instances popliteal aneurism has undergone a spontaneous cure after the patient had been admitted into hospital for the purpose of undergoing operation. Two cases of this kind occurred some years since at the Meath Hospital, where a bandage had been simply placed round the limb, which could have produced little or no pressure, and was not intended to act in that way. More recently another case occurred to Dr. Brunker in the Louth Infirmary, the details of which have been given in the Medical Press.

"In the eighth volume of the Medical and Physical Journal, Sir Astley Cooper has described an instrument for compressing the femoral artery, which was employed in one case of popliteal aneurism by Sir William Blizard; although the patient possessed unusual fortitude, he was not able to bear the pressure longer than nine hours. A similar apparatus is mentioned by Sir Philip Crampton in a communication contained in one of the early volumes of the Medico-Chirurgical Transactions, to have been tried in a case of popliteal aneurism, in which he afterwards assisted the late Mr. Dease to operate, but no force that could be borne was sufficient to stop the pulsation in the ham. Mr. Samuel Cooper has given a description of it in his Surgical Dictionary, and adds, that 'few patients can endure the pressure of such instruments for a quarter of the time which Sir William Blizard's patient was able to bear it, when put on sufficiently tight to afford any chance of obliterating the artery; and on account of the suffering they occasion, they are rarely used by modern surgeons.'

"A very ingenious instrument for compressing the femoral artery was subsequently invented by Mr. L'Estrange, and employed with success by Sir Philip Crampton and Mr. M. Collis at the Meath Hospital, in some cases where secondary hæmorrhage occurred after the operation of tying the femoral artery. The late Mr. Todd, some years ago, successfully applied compression (by an instrument different from any of those alluded to) in one case of popliteal aneurism; it was also used with success, though under most unfavorable circumstances, by Mr. M'Coy, in a case of femoral aneurism, which he brought before the Surgical Society at a late meeting. I am not aware that this instrument was subsequently tried."

To Mr. Hutton is due the credit of reviving the practice of pressure in the cure of popliteal aneurism—a practice which is discouraged by all modern works on surgery. This opinion has no doubt arisen from the universal belief, that to cure an aneurism by compressing the artery above the tumor, the complete interruption of the current of the blood through the vessel is essential.

"When it was considered," says Mr. B., "absolutely necessary for the success of compression, that such an amount of pressure should be applied as was almost certain to produce sloughing of the part, and very certain to occasion intense pain and suffering to the patient; and when, in addition, this was to be prolonged through five successive nights and days; we can readily understand why patients refused to submit to it; and we can easily account for the disrepute into which the practice fell, and for the unwillingness of surgeons to adopt this treatment, in preference to the simple operation of placing a ligature upon the femoral artery. It would however appear, that it is not at all essential, that the circulation through the vessel leading to the aneurism should be completely checked; it may, perhaps, be advantageous at first, for a short period, by which the collateral circulation will be more certainly established; but the result of this case, if it does no more, establishes the fact, that a partial current through an aneurismal sac will lead to the deposition of fibrine in its interior, and cause it to be filled and obstructed, so as no longer to permit of the passage of blood through it. Pressure, in order completely to obstruct the circulation in an artery, must necessarily be slower in curing an aneurism, as it must in some measure act, by causing obliteration of the vessel at the part to which the pressure has been applied; whereas a partial current through the sac enables the fibrine to be readily entangled in the parietes of the sac, in the first instance, and this goes on increasing, until it becomes filled; the collateral branches having been previously enlarged, the circulation is readily carried on through them.

"It appears to me, that in resorting to compression in popliteal aneurism, with the view of causing the sac to be filled up by fibrine, we should never neglect the accessory measures, known as Valsalva's plan of treatment, which alone have been sufficient to effect the cure of aneurisms of large size. In fact, I look upon bleeding and low diet as material aids in bringing about the cure by pressure. Bleeding will cause the blood to coagulate more rapidly, but it may be said that it will also have the effect of hurrying the circulation; we have, however, in digitalis, a very efficient means of diminishing the frequency of the action of the heart and arteries and of quieting the circulation, when the patient is kept in the horizontal posture; and if we take into account the condition of the vessels when the amount of the circulating fluid is diminished, we shall find that the sac of the aneurism is placed in a very favorable position for entangling the fibrin, which, if it continues to be deposited, will ultimately lead to the obliteration of the sac, and the cure of the aneurism."

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13. *On a New Way of Operating for Cataract.* By JOHN MORGAN, Esq., F. L. S., Surgeon to Guy's Hospital.—The pupillary aperture having been dilated by the application of belladonna to the eyebrow, the patient is to be placed as in cases of operation for depression, the eye to be operated upon being towards the light, and the head of the patient fixed by an assistant opposite to the breast of the operator, and against his own. I always prefer the sitting to the recumbent posture, except in operations for extraction, as there is an advantage gained by seeing down into the globe as you depress the lens to its destination. The needle which I use is extremely fine, of the same thickness from the point to the handle; cutting at the point, but not at the sides, and hardly longer than the diameter of the globe. In all operations on the eye, I invariably use a very short needle; which is, in my opinion, much more convenient than one of the usual length. The point of the instrument is now to be passed through the sclerotic, at the distance of rather more than a line from its junction with the cornea, and just below its transverse diameter; it is then to be carried,

with a slight inclination forward, directly through the central substance of the cataract, completely transfixing the lens. This part of the operation requires a good deal of careful management: the object will be to disturb surrounding parts as little as possible, by transfixing the lens *in situ;* and this is to be effected, not by pushing the point of the needle at once directly onwards, but by carefully drilling its way through the opaque body by rotating the handle of the instrument as it is held between the thumb and forefinger, while the point at the same time is gently urged onward. Having thus insured complete transfixion by drilling, the first step of the operation is accomplished; and it will be seen that the second can now be performed with the greatest ease and precision —I mean the dislocation and depression of the lens, which must of necessity follow the exact course of the point of the instrument by which it is impaled; and as the needle has been introduced below its transverse diameter, it will be *pulled*, instead of *pushed* down, and thus be effectually prevented turning on its axis into the vitreous humor as it is descending—an occurrence which will sometimes take place during the operation as at present performed, and which, for obvious reasons, it is desirable to guard against. Another advantage gained by transfixion is, that all chance of injuring the retina by the pressure of the lens, either from its slipping from the point of the instrument during the operation, or from its having been unconsciously left resting on that membrane after its completion, all danger of amaurosis from such causes is removed; for we have such perfect command over the opaque body, that we can determine to the greatest nicety the exact course it will take in its descent, as well as the precise situation in which it will be left after the needle is withdrawn. The course should be so directed, that the anterior surface of the lens passes hardly a line distant from the corpus ciliare and retina, taking a curved sweep as it descends, corresponding with the concave curvature of the interior of the globe; and it should be left as nearly as possible with its upper circumference a line below the lower edge of the widely-dilated pupil. Very great care is required in disentangling the instrument from the cataract, as it is being withdrawn from the globe; and this should be done by drilling the needle *out* from the depressed lens as it lies, without changing the direction of the handle of the instrument till it has been liberated in the same manner as it has been drilled *in* while the lens was *in situ;* for by neglecting this precaution, the lens will follow the point of the instrument, and be either raised again or forcibly dragged against the retina as the instrument is drilled out. Should any portion of an opaque capsule remain in the pupillary aperture after depression, it should be brought into the anterior chamber, if possible, with the point of the needle, before it is withdrawn from the globe, and after it has been disentangled from the lens. But I would recommend caution in cutting up a *posterior* capsule, lest the cells of the vitreous humor should be broken down in doing so; for, as I have already stated, I consider the preservation of their integrity very essential to the *success* of an operation for depression.

The exact course of the lens may certainly be well directed when it is thus fixed to the end of the needle, and as little of the vitreous humor as possible is thereby displaced, so that the hyaloid membrane is comparatively unbroken, and thus acts as a powerful agent in preventing the future ascent of the lens; but we question whether this advantage will compensate for the risk of *drilling* the needle into the lens, and then *drilling* it out again. We suspect, that if the lens were harder than usual, it would be even more displaced than by the simple operation of depression, and when it had become depressed on the point of the needle, cases would occasionally occur in which it might be difficult even to extricate it from the lens.—*Braithwaite's Retrospect.*

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14.—*Statistics of Cancer.*—The following are the results of researches on the prevalence of this disease throughout France, which have been made with much care and accuracy on the part of M. Le Roy d'Etiolles:—

Of 2781 cases occurring in the practice of 174 surgeons, 1227 happened in

individuals above forty, and 1061 to others above sixty years of age. The cases of cancer of the uterus were about thirty per cent.; of the breast twenty-four per cent. Cancer of the mouth was in women only as one to one and a half per cent., while in men (probably from the use of the tobacco pipe) it was as much as twenty-six per cent. Cancers supposed to have been of hereditary transmission, figured only as 1 in 278(?); while those induced by scrofula were as 1 in 10; and those by syphilis as 1 in 5.

The most useful part of the inquiry is that which is brought to bear upon the utility or otherwise of operating on cancers. Out of 1172 patients not operated on, 18 lived for more than thirty years after the first appearance of the disease; while out of 801 operated on by excision or caustic, the existence of only 4 was prolonged for a similar lapse of time; 14 patients operated on, and 34 not operated on, lived for a period of from twenty to thirty years, and 88 in the first category, and 228 in the second, lived from six to twenty years after the first appearance of the disease. The ordinary duration of life after this period among persons not operated on, is said to be five years for men, and five and a half for women; while among those operated on, it is no more than five years and two months for men, and six years for women.

From these results the natural conclusion is, that the ablation of cancer (leaving out of account the risks attending the operation itself) does little, even when successful, to prolong life, and is therefore (in France at least) of very questionable utility. Results like these, startling as they may seem, and however they may demand subsequent corroboration, are, at least, indications of the light which statistical science is enabled to throw upon the actual and relative value of many of the aids in medicine and surgery, of which we at present avail ourselves.—*London Lancet, June 3d*, 1843.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

15. *Medical Report of the Western Lying-in Hospital and Dispensary*, for the years 1841–42. By Fleetwood Churchill, M. D. etc., Physician to the Hospital, and R. D. Speedy, Esq., etc., Surgeon to the Hospital, etc.

These records include the delivery of 1206 women, but from these we must deduct 43 cases of abortion, leaving 1163 cases of labor at full time.

The number of children amounted to 1175, (691 males, and 484 females,) of which 63 (44 males and 19 females) were still-born, or died at birth; of these

12	were premature.	3	were arm presentations.
15	" still-born.	3	" funis presentations.
2	" putrid.	6	" crotchet cases.
4	" footling cases.	2	" forceps cases.
8	" breech presentations.	1	" placenta prævia.
1	" head and hand presentation.	4	" syphilitic.

* * * * *

In 1008 cases the presentation was as follows:

In 941 the head presented.

13	the hand descended with the head.	
22	the breech presented	—8 dead.
18	the feet do.	4 do.—the funis prolapsed in 3.
6	the funis do.	4 do.
5	the arm do.	3 do.—two of them putrid.
2	the placenta do.	1 do.

There were *thirteen* cases of twins. In *four* cases the children presented naturally—*six* children were saved, and *two*, which were premature, died. In *six* cases one child presented the breech and the other the head—*ten* were born alive, *two* were lost. In *one* case one child presented footling and the other the head—*both* were saved. In *another*, one child presented the head and the funis, and the other the foot and funis—*both* were lost. In a *third* case both the children presented the feet and funis, and were *lost*.

In *ten* cases there was hæmorrhage between the birth of the child and the

expulsion of the placenta; in *six* of which manual extraction was necessary, but no unfavorable results followed.

In *six* cases flooding occurred before delivery—*three* were cases of *accidental*, and *three* of *unavoidable* hæmorrhage. The rupture of the membranes was sufficient in the accidental and in one of the unavoidable cases, and the mothers and the children recovered. It was necessary to turn and deliver the child in the other two cases—*one* of the mothers died and *one* recovered; *one* of the children was saved.

Seven patients were attacked by *convulsions*—all recovered.

One fatal case of *uterine phlebitis* occurred, and several slight attacks of *hysteritis*, which were relieved by the usual treatment.

We met with *one* fatal case of *rupture of the uterus.*

Version was performed *six* times (1 in 243); *five* times on account of presentation of the arm—all the mothers recovered, and three children were saved, the others were putrid; and *once* because of unavoidable hæmorrhage.

The *forceps* were used in *eight* cases (1 in 182.) *Seven* of the mothers recovered, and the death of the remaining *one* was caused by disease of the heart.

In *eight* cases the *perforator* was employed (1 in 182.) *Six* of the mothers recovered, and *two* died—one from rupture of the uterus, as recorded above, and one from disease af the liver.

Of the 1463 women attended during these two years, only *five* died, or 1 in 292. *One* sank from disease of the liver, *another* from disease of the heart, a *third* after unavoidable hæmorrhage, a *fourth* from uterine phlebitis, and the *fifth* from ruptured uterus.

* * * * * *

Since the establishment of the hospital, seven years ago, 3211 women have been attended, of whom 15 died, or 1 in 214.

There occurred	4	cases of	unavoidable hæmorrhage	1 in 802.
"	6	do. "	accidental hæmorrhage	1 in 525.
"	34	do. "	hæmorrhage after labor	1 in 94.
"	10	do. "	convulsions (3 lost)	1 in 321

Version was practised in seventeen cases—1 in 188. Sixteen recovered. Six children saved.

The forceps were used in eleven cases—1 in 291. Ten recovered. Seven children saved—two putrid.

The perforator was employed in twenty cases—1 in 160. Seventeen recovered.—*Dublin Journal of Med. Science, July*, 1843.

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16. *Sterility.*—It appears, according to the official report on the Sanitary Condition of the Laboring Population in Great Britain, made by the Poor-law Commissioners, that the great mortality in large towns, instead of proving a check to the increase of population, is, on the contrary, accompanied by a proportion of births to the number of inhabitants actually higher than in rural districts, in which the ratio of deaths is much lower. For example, "In Manchester, where one twenty-eighth of the whole population is annually swept away, the births registered amount to one in 16 of the whole population; while, in the county of Rutland, where the proportion of deaths is one in 52 of the population, the proportion of births is only one to 33."

Mr. Chadwick subsequently proves, by the result of last year's registration, that "there has been an increase in the population from births alone in those parts of the country where the proportionate mortality is greatest."

In connection with these unexpected results, the following remarks by Dr. Henry McCormac, in his "*Methodus Medendi*," possess much interest:

It is remarkable (he says) that habitual excess in eating and drinking proves adverse to fertility; and such, I take it, is the principal source of the sterility of

the rich; this has even been observed in the inferior animals. Habitual plethora seems to indispose to fruitfulness; while poor people, with a bare sufficiency, if even that, have houses swarming with offspring. The prolific tendencies of the Irish are well known: barren marriages are rare among them. Fish-eaters, ichthiophagi, who have to work hard, and live without excess, are proverbially fruitful. Hence it is that the reproductive tendencies of a people—a problem vainly attempted by Malthus and others, is in the inverse ratio of their comforts, and not merely of their numbers, as conjectured by Sadler. Hence, also, the poorer and more wretched a population, within certain limits, the more prone to increase. In other respects, the poor follow, but do not precede the promptings of nature. The rapidity which the void left by famine, war, and epidemics, fills up, has been frequent matter of observation, and is readily enough explained by the increased facilities of subsistence and consequent inducements to marriage among survivors. In two or three instances, by enjoining separate apartments for a time, simple sparing regimen, the shower-bath, and exercise in the open air, I have reason to believe that the wishes of parents, previously childless, were successfully promoted.

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17. *Reparative Energies of Woman.*—Profuse menstruation does not weaken in proportion to the quantity of the blood lost; indeed, as a general remark, it seems to be true that women can bear copious hæmorrhages much better than men. They recover their strength and color much more quickly. A man will remain pale and enfeebled for some months after a great loss of blood, but a woman, under equally favorable circumstances, will be herself again in one half the time. The menstrual evacuation required that nature should endow the female constitution with more powerful means to repair losses of blood, the hæmorrhages before and after confinement, the drain, so to speak, on the system for the nourishment of the infant, &c., demanded more efficient reparative energies. A practical consequence of immense importance may be deduced from these considerations. They impress upon us the necessity of placing but little reliance on blood-letting in the treatment of women affected with sub-inflammatory affections, in consequence of the rapidity with which losses of blood are repaired, and consequently indicate the superior value of a regulated and spare diet, by which the supply of nutritive matter to the system may be kept in check. This important truth is to often quite overlooked in practice, and, in very many cases, the most judicious medical treatment is virtually rendered null by inattention to the arrangement of the diet.—*Medical Times.*

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

18. *M. Orfila on a New Antidote of Corrosive Sublimate.*—M. Mialhe recently announced to the Royal Academy of Medicine that, having taken a solution of corrosive sublimate into his mouth, he found that the disagreeable taste was almost immediately dissipated by washing his mouth out with some proto-sulphuret of iron recently prepared and mixed with water. From this circumstance he inferred that the latter substance might act as an antidote of the former, and decompose it, giving rise to the chloruret of iron and the sulphuret of mercury—compounds which do not act poisonously on the living body. To ascertain the correctness of this opinion, I instituted, says M. Orfila, the following experiments:

a. I prepared 100 grammes of the proto-sulphuret of iron by decomposing the proto-sulphate of the metal with the hydrated sulphuret (sulf-hydrate) of ammonia. The mixture was put into a large stoppered flask, kept constantly full of water, in order to avoid the contact of the atmospheric air—which would not have failed to have converted the proto-sulphuret into a per-sulphuret. The

precipitate having all fallen down, I decanted off the liquid with a syphon, and then I filled the flask with water and corked it securely. When by repeated washings—always carefully excluding the contact of air—the liquid was found to contain no traces either of the sulphate of iron or of the sulf-hydrate of ammonia, I gave a middle-sized dog about the tenth part of the proto-sulphuret suspended in water, and then immediately afterwards 60 centigrammes of corrosive sublimate dissolved in 100 grammes of water: the œsophagus of the animal was tied, and kept so for 22 hours. With the exception of several dejections from the bowels, it did not exhibit any of the usual symptoms of poisoning with the sublimate, and appeared on the whole to be very little inconvenienced, (not even with a ligature around its œsophagus?) On the next and following days, "il se portrait à merveille." A similar experiment was performed on another dog, and with similar results.

b. I introduced, by means of an elastic-gum tube, into the stomach of a dog, 60 centigrammes of corrosive sublimate, dissolved in 100 grammes of water, and immediately afterwards a quantity of the proto-sulphuret of iron similar to what was used in the first experiment: the œsophagus was tied, and kept so for 12 hours. The animal did not suffer more than in the first instance, and next day it had perfectly recovered.

c. The same quantity of the poison was given to another dog, and ten minutes were allowed to elapse before the dose of the proto-sulphuret was administered; in other respects the animal was treated as before. After the lapse of four hours, the ligature was removed from the œsophagus. The animal died in the course of the night, having exhibited all the usual symptoms of poisoning with corrosive sublimate. The conclusions I draw from these experiments are—

1. That the proto-sulphuret of iron completely neutralises the poisonous properties of corrosive sublimate, if it is administered in a sufficiently large dose immediately after the ingestion of the latter.

2. That, like the best accredited antidotes, it fails, if it be not administered for 10 or 15 minutes after the poison has been swallowed.

3. That—while we admit that the proto-sulphuret decomposes the corrosive sublimate much more energetically and efficiently than albumen does, and that therefore it should be preferred whenever it is at hand, so that it can be administered immediately after the poison—the medical man should never lose any time in waiting for it, but at once give the white of eggs blended with water freely in all cases of poisoning with this salt of mercury.—*Journal de Chimie.*

MISCELLANEA.

19. *Examination of the Body of the late Mr. Tyrrell, fifty-six hours after Death.—Chest.*—The pleura closely adherent throughout the whole of the right side of the chest, by old adhesive bands. On the left by a few only.

The right lung hepatised, or consolidated, nearly throughout its whole extent; there being only a very small portion that was crepitant on pressure. The mucous membrane of the lower portion of the trachea and right bronchus thickened, and of a dark brick-dust hue. Left lung engorged with blood, but crepitating tolerably on pressure.

The pericardium considerably distended, and containing from an ounce and a-half to two ounces of dark fluid blood. On the posterior aspect of the right auricle, the investing pericardium, to a considerable extent, had a rough, depressed, and by the aid of a lens, an ulcerated appearance; while the opposite surface of the loose pericardium, to the same extent, had a granular or tuberculated appearance, very similar to the tuberculous accretions which we find occasionally on the peritoneum; there were two or three adhesive bands connecting these two surfaces.

The heart itself was twice the natural size; the muscular fibre pale, flaccid, and flabby, and collapsing; the cavities of both ventricles much dilated, but without hypertrophy of the walls; the left ventricle more especially dilated;

in the right ventricle were two or three delicate filaments of lymph of considerable strength, stretching between the carneæ columnæ and chordæ tendineæ, and across the cavity, the evident result of former endocarditis. All the valves of the heart and aorta were perfectly natural.

The liver was enlarged, very much indurated, especially at the superior portion of the right lobe, and granular throughout.

Signed, H. S. Roos, M.D. C. Aston Key. George Beamen. James Dixon. William Trew.

Note.—The fluid blood in the pericardium was most probably exuded from the depressed and apparently ulcerated surface of the pericardium before stated.—*Lon. Med. Gazette, for June*, 1843.

2.

American Medical Intelligence.

The Library of the New York Hospital.

Sir,—Through the medium of your Journal, allow me to invite the attention of the medical profession to the valuable library of the New York Hospital. Rich in the works of the ancient masters, as well as those of modern times, amply supplied with British, French, and American periodicals, and with plates illustrative of General, Special, and Pathological Anatomy, it affords facilities to the prosecution of medical and surgical inquiries unequalled by any similar library in this city. Numbering at present nearly 5000 volumes, and increasing by frequent additions of foreign and domestic publications, it merits and it should receive more general attention from the profession.

From its foundation in 1796 to about 1815, its growth and increase depended upon valuable donations granted from time to time by the Governors of the hospital and the liberality of several members of the medical profession. Since the latter period its augmentation and preservation have depended, for the most part, upon the monies arising from the sale of tickets to students, who were desirous of attending the practice of the institution. But few members of the profession have availed themselves—as for a small consideration many might have done—of the advantages and benefits to be derived from the study or perusal of the valuable collection which it contains. Among the numerous works recorded in the catalogue are many which are illustrated by expensive plates, and which the private practitioner cannot, without inconvenience, place on his shelves. Those of Cruveilhier, Carswell, Bright, Hope, Annesley, Rayer, Cooper, &c., richly merit the attention of every practitioner.

The Library contains treatises on Agriculture, Botany, Horticulture, Geology, Mineralogy, Natural History, Natural, Experimental, and Moral Philosophy, the Arts and Sciences, Chemistry, Electricity, Galvanism, Medical Biography and Literature, the Theory and Practice of Medicine, Surgery, Materia Medica, and Pharmacology, Anatomy, General, Descriptive, Pathological, and Comparative, Physiology, Midwifery,

and the Diseases of Women and Children, &c. Also a selection from English, French, and American periodicals.

It is hoped that this brief notice of the Library of the New York Hospital will suffice to awaken a lively interest in the profession for its future welfare and growth, and that the aim of the Governors to render it as available as possible will meet with a corresponding spirit on the part of the medical community.

The Library is open daily from 12 to 1 P. M.

JOHN S. VANDERVOORT, M. D., Librarian.

To SAMUEL FORRY, M. D.

Herculean Treatment of Dysentery.—We make the following extract from a private communication, dated October 3d, from Dr. P. Fahnestock, of Pittsburgh, Pa.

There has recently prevailed in this vicinity, about two miles from the city, an endemic dysentery, characterized by considerable febrile action, with frequent mucous or bloody evacuations, and violent tormina and tenesmus. It attacked both sexes and all ages indiscriminately, and among them I attended from sixty to eighty cases. As my treatment was peculiar, and as its success confirmed its propriety, (but three cases having proved fatal,) I will state how I managed them.

In the case of an adult patient of either sex, having ten or twelve stools per hour, consisting of blood and mucus alone, accompanied with great tormina and tenesmus, I usually gave from six to fifteen grains of pulverized opium, with from xx. to xxx. grs. of calomel; but if the pulse was full and frequent, this treatment was premised by general blood-letting and the application of leeches to the anus. In six or eight hours after the administration of the medicine, I prescribed the following:

℞. Ol. Ricini, ℥iss.
Spir. Terebin ℥ss.

These were my maximum doses; and after the operation of the oils, I gave calomel and Dover's powder in small doses, with gum water as a drink, and rice and arrow root as diet. It was seldom found necessary to repeat the calomel and opium. To children, six or eight years old, I gave as much as four or five grains of opium, without producing more than a few hours' sleep.

Notes on the Treatment of Rigidity of the Os Uteri by means of Tartar Emetic, and on the use of Strychnine in Influenza. By DAVID GILBERT, M. D., Gettysburg, Pa.

Tartar Emetic in Tardy Labor.—We are frequently called to cases in which labor has commenced, but the progress is slow, both on account of the insufficiency of the uterine contractions and rigidity of the os tincæ. These cases are most frequently found to occur in patients of tense fibre, and rather robust constitutions. Bleeding produces some relaxation, but rarely hastens the labor; since, in most instances, it does not add anything to the vigor of the pains. Several years ago, while in attendance upon such a case, wishing to expedite the labor, I felt a very strong desire to administer the *secale cornutum*, but was prevented

by reflecting upon the well-ascertained effects of that powerful agent under such circumstances. The question whether some other article of the *materia medica* might not be advantageously exhibited, then presented itself to me. Relaxation of the *os uteri* and expulsive contractions, were the principal desiderata. Emesis in the commencement is always looked upon as a symptom of speedy labor; *ergot* also produces nausea, and frequently vomiting. In evacuating the stomach, the diaphragm, abdominal muscles, &c., are called into violent action: these same muscles aid the uterus in its expulsive efforts; hence emesis may be looked upon as a powerful means of exciting labor and producing efficient expulsive contractions of the uterus, because the same set of associated organs are in action; and such is the sympathy between the stomach and uterus, that contractile efforts are easily transferred from the former to the latter, the more especially since the uterus is about to take on such action of its own accord. Again, while emesis excites, and is accomplished in part by the associated contractions of the muscles constituting the abdominal parietes, it also produces relaxation of the other parts of the system, and of none more certainly than the os uteri, under these particular circumstances. Reasoning thus, I was induced to make a trial of tartrate of antimony and potass, in doses of half a grain the first portion, and then a quarter of a grain every fifteen minutes, until emesis; and as soon as retching commenced, the uterine contractions strengthened, and the labor terminated speedily. I have frequently used the tartar emetic since, and always with the most satisfactory results.

I was not then aware that this remedy had been used by Ramsbotham, who, speaking of rigidity of the os uteri, says that "antimony, in doses sufficient to keep up a feeling of nausea, has been exhibited in these cases with marked effect."

Strychnine in Influenza.—The prevailing epidemic influenza, made its first appearance, during the present season, in Gettysburg, Pa., about the 1st of July. The disease was characterized by the usual symptoms. About two-thirds of the whole number of inhabitants became subjects of the disease, not one half of whom, however, deemed the malady of sufficient severity to require medical advice. A few of the cases to which our attention was called, were complicated with bronchitis, arachnetis, rheumatism, &c. In two cases severe nervous ear-ache was the leading symptom; in one case, periodical neuralgia of the supra-orbital nerve, came on every morning at 8 o'clock. Observation soon convinced us that this disease, in the commencement, had its seat in the *nervous system*, which was in a depressed state, not yielding its normal quota of nervous influence; and that after this, the *mucous tissue* was the next to suffer. Having succeeded with *strychnine* in many of those diseases denominated *neuroses*, in which there was *no inflammation or congestion of the nervous centre*, we supposed that in this affection its use might be followed with results equally favorable; and we therefore resolved to use the remedy upon ourselves, provided there was an opportunity. With this we were *favored* about two weeks ago, when, whilst under the influence of mere nervous sedation and irritability, with a commencing derangement of the mucous tissue of the head, we took a full dose of the medicine; and we were happy to find ourselves relieved in a few hours of every symptom. We were soon after called upon by a young gentleman, who was attacked with the prodromic

symptoms, to whom we gave a portion, which also cut short the disease. Our next case was that of a female æt. 50, subject to occasional paroxysms of hysteria. We found her in the chill with violent pains in the head, back, and extremities, accompanied by hoarseness and cough. Gave comp. ext. colocynth grs. x., and blue mass, grs. v., as a laxative, to be aided by sulph. magnesiæ, if necessary. After the intestinal canal was evacuated, we exhibited the strychnine; and in twelve hours the patient was free from the disease. We have since exhibited this potent nervine in a number of cases with equally good effects, always first subduing any local inflammation which might be present.

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Honors from Abroad.—We learn that Professor Valentine Mott was elected an honorary member of the Royal Academy of Medicine of Belgium, on the 29th of October, 1842. The Academy elects its own members. The nomination of those receiving degrees and honors is under the *agrégation*, (*soumise à l'agrégation*,) of the king.

—

A Dinner by the Physicians of New York.—A dinner will be given by the "*New York Society for the Relief of the Widows and Orphans of Medical Men*," at the American Hotel, on Wednesday, November 8th, at 5 o'clock, P. M., in which the profession generally are invited to participate.

Tickets may be procured from Dr. Delafield, the President of the Society, from any one of the following committee, viz., Drs. Jas. Macdonald, J. H. Borrowe, John Revere, J. C. Beales, and John Stearnes, or at the book-store of J. & H. G. Langley, 57 Chatham-street.

As the arrangements for the dinner will depend on the number of tickets distributed, those who intend to join in the anniversary are respectfully invited to procure their tickets at an early period.

As it is seldom that the physicians of this city, who are too much estranged from one another by causes to them unavoidable, have an opportunity of indulging in the pleasures of social communion, it is to be hoped that no one will fail to avail himself of the occasion here presented.

—

The coming Session of the New York Schools.—We referred to this subject in our last Number, stating that last winter there were nearly 400 medical students in this city, and that it was every way probable that the number this winter would not fall short of 500. In this *prognosis*, as the doctors learnedly say, we are fully confirmed by present indications; for it is said at the schools that the number now present exceeds by fifty per centum, the number present last year at the corresponding date; and that these students, who are mostly from the southern States, give accounts authorizing the most favorable anticipations.

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Surgeon J. M. Foltz, United States Navy, well and favorably known to the readers of this Journal, has been appointed to the Frigate Raritan. The Raritan will be the flag-ship on the coast of Brazil, where she will remain one year; and thence she will proceed to the Mediterranean, where she will finish her cruise. Our readers will all, doubtless, join us in wishing him a "*bon voyage.*"

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